

REFERRAL AND ATTACHMENTS

5 of 7 copies

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Memorandum

ATTACHMENT NO. 1
WELL DRILLER'S LOGS

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

OWNER W. J. Smith Wood Pres. Address Denison TX
(Name) (Street or RFD) (City) (State) (Zip)

LOCATION OF WELL:
County Grayson miles in _____ direction from Denison
(N.E., S.W., etc.) (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

Legal description:

Section No. _____ Block No. _____ Township _____

Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines. _____

☐ See attached map.

3) TYPE OF WORK (Check):

☒ New Well ☐ Deepening
☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):

☐ Domestic ☐ Industrial ☐ Public Supply
☐ Irrigation ☒ Test Well ☐ Other _____

5) DRILLING METHOD (Check):

☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored
☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other

6) WELL LOG:

Date drilled 10-13-85

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	106

7) BOREHOLE COMPLETION:

☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____

If Gravel Pocket size interval ... from 106 ft. to 30 ft.

From (ft.)	To (ft.)	Description and color of formation material	8) CASING, BLANK PIPE, AND WELL SCREEN DATA:
---------------	-------------	---	--

B) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf. Slotted, etc. Screen Mfg., if commercial	Setting (ft.)		Gate Chain Screen
			From	To	
4 1/2	IO		0 -	106	
		slotted	106 -	86	
			66 -	46	

9) CEMENTING DATA {Rule 319.44(b)}

Cemented from 0 ft. to 30 ft.
ft. to _____ ft.

Method used Mosel
Cemented by Grout Tube

10) SURFACE COMPLETION

☐ Specified Surface Slab Installed [Rule 319.44(c)]

☐ Pitless Adapter Used [Rule 319.44(d)]

☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL-

Static level 3 ft. below land surface Date 10-18-87
Artesian flow _____ gpm. Date _____

12) PACKERS:

Type	Depth
------	-------

13) TYPE PUMP:

☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____

Depth to pump bowls, cylinder, jet, etc., _____

14) WELL TESTS:

Type Test: ☐ Pump ☒ Bailor ☐ Jetted ☐ Estimated
Yield: 20 spin with 10 ft. drawdown after 1 hr

Did you knowingly penetrate any strata which contained undesirable water? ☒ Yes ☐ No

If yes, submit "REPORT OF UNDESIRABLE WATER"

Type of water? oil Depth of strata 14-18

Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Moser Drilling Water Well Driller's License No. 2386
(Type or Print)
ADDRESS Rt 1 Box 557 Pottsville TX 75076
(Street or RFD) (City) (State) (Zip)
(Signed) Bonnie Abston (Signed) _____
(Licensee Water Well Driller) (Owner)

Please attach electric log, chemical analysis, and other pertinent information, if available.

Please use black ink.
Send original copy by
certified mail to the
Texas Department of Water Resources
P. O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

VNER W.J. Smith Wood Pres. Address Denison Tx 7502
(Name) (Street or RFD) (City) (State) (Zip)
LOCATION OF WELL:
County Grayson miles in _____ direction from _____
(N.E., S.W., etc.) (Town)

Driller must complete the legal description to the right
with distance and direction from two intersecting sec-
tion or survey lines, or he must locate and identify the
well on an official Quarter- or Half-Scale Texas County
General Highway Map and attach the map to this form.

☐ Legal description:

Section No. _____ Block No. _____ Township _____

Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☐ See attached map.

3) TYPE OF WORK (Check):

☒ New Well ☐ Deepening
☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):

☐ Domestic ☐ Industrial ☐ Public Supply
☐ Irrigation ☒ Test Well ☐ Other _____

5) DRILLING METHOD (Check):

☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored
☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

DIAMETER OF HOLE

Dia. (in.) From (ft.) To (ft.)

8 Surface 98

Date drilled 10-22-85

7) BOREHOLE COMPLETION:

☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____

If Gravel Packed give interval ... from 98 ft. to 30 ft.

From (ft.) To (ft.)

Description and color of formation material

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf. (Slot), etc. Screen Mfg. if commercial	Setting (ft.)		Gage Casing Screen
			From	To	
<u>8</u>	<input checked="" type="checkbox"/>	<u>slotted</u>	<u>0</u>	<u>98</u>	
			<u>98</u>	<u>78</u>	
			<u>68</u>	<u>48</u>	

9) CEMENTING DATA [Rule 319.44(b)]

Cemented from 30 ft. to 0 ft.

Method used grout tube

Cemented by Moser

10) SURFACE COMPLETION

☐ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL:

Static level 3 ft. below land surface Date 10-22-85

Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

13) TYPE PUMP:

☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder

☐ Other _____

Depth to pump bowl, cylinder, jet, etc., _____ ft.

15) WATER QUALITY:

Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No

If yes, submit "REPORT OF UNDESIRABLE WATER"

Type of water? _____ Depth of strata _____

Was a chemical analysis made? ☐ Yes ☐ No

14) WELL TESTS:

Type Test: ☐ Pump ☒ Bailor ☐ Jetted ☐ Estimated

Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Moser Drilling

(Type or Print)

ADDRESS Rt 1 Box 557

(Street or RFD)

(Signed) Arnie Moser

(Licensed Water Well Driller)

Water Well Driller's License No 2386

Pottshoro

(City)

(Signed) _____

(Registered Driller Trainee)

For TDWR use only

Well No. _____

Located on map _____

Please attach electric log, chemical analysis, and other pertinent information, if available.

DEPARTMENT OF WATER RESOURCES COPY

Please use black ink.
Send original copy by
certified mail to the
Texas Department of Water Resources
P. O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

#4 ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

WNER W.S. Smith Wood Pres. Address Denison TX 7502
(Name) (Street or RFD) (City) (State) (Zip)

LOCATION OF WELL:
County Grayson miles in _____ direction from _____ (Town)
(N.E., S.W., etc.)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:

Section No. _____ Block No. _____ Township _____

Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☐ See attached map.

3) TYPE OF WORK (Check):

☒ New Well ☐ Deepening
☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):

☐ Domestic ☐ Industrial ☐ Public Supply
☐ Irrigation ☒ Test Well ☐ Other _____

5) DRILLING METHOD (Check):

☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored
☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

DIAMETER OF HOLE
Dia. (in.) From (ft.) To (ft.)

8 Surface 85

Date drilled 10-23-85

7) BOREHOLE COMPLETION:

☐ Open Hole ☐ Straight Wall ☐ Underreamed

☒ Gravel Packed ☐ Other _____

If Gravel Packed give interval from 85 ft. to 30 ft.

From (ft.) To (ft.) Description and color of formation material

1-8 clay + sand
8-18 yellow clay
18-20 clay + oil
20-78 lime & shale streaks
78-85 sand
85-85 grey shale

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.)		Gage-Casing Screener
			From	To	
<u>8 1/2</u>	<u>EO</u>	<u>slotted</u>	<u>0</u>	<u>85</u>	
			<u>85</u>	<u>45</u>	

9) CEMENTING DATA [Rule 319.44(b)]

Cemented from 30 ft. to 0 ft.

Method used Grout Tube

Cemented by Moser

10) SURFACE COMPLETION

☐ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL:

Static level 10 ft. below land surface Date 10-23-85

Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

13) TYPE PUMP:

☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____

Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:

Type Test: ☐ Pump ☒ Bailor ☐ Jetted ☐ Estimated
Yield: 20 gpm with 30 ft. drawdown after 1 hrs.

5) WATER QUALITY:

Did you knowingly penetrate any strata which contained undesirable water? ☒ Yes ☐ No

If yes, submit "REPORT OF UNDESIRABLE WATER"

Type of water? oil Depth of strata 18-20'

Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Moser Drilling Water Well Driller's License No. 2386
(Type or Print)

ADDRESS Rt 1 Box 557 Pottsville TX 75076
(Street or RFD) (City) (State) (Zip)

(Signed) Donnie Albers (Signed) _____
(Licensed Water Well Driller) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TDWR use only
Well No. _____
Located on map _____

DEPARTMENT OF WATER RESOURCES COPY

Please use black ink.
Send original copy by
certified mail to the
Texas Department of Water Resources
P. O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

VNER W.J. Smith Wood Pres. Address Denison Tx 75026
(Name) (Street or RFD) (City) (State) (Zip)

LOCATION OF WELL:
County DeKalb miles in _____ direction from _____
(N.E., S.W., etc.) (Town)

Driller must complete the legal description to the right
with distance and direction from two intersecting sec-
tion or survey lines, or he must locate and identify the
well on an official Quarter- or Half-Scale Texas County
General Highway Map and attach the map to this form.

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____

☐ See attached map.

3) TYPE OF WORK (Check):

☒ New Well ☐ Deepening
☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):

☐ Domestic ☐ Industrial ☐ Public Supply
☐ Irrigation ☒ Test Well ☐ Other _____

5) DRILLING METHOD (Check):

☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored
☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 10-24-89

DIAMETER OF HOLE

Dia. (in.) From (ft.) To (ft.)

8 Surface _____

7) BOREHOLE COMPLETION:

☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____

If Gravel Packed give interval ... from 100 ft. to 30 ft.

From (ft.) To (ft.) Description and color of formation material

4 Yellow clay
7 sand
17-19 clay
19-22 clay + oil
22-26 lime
26-75 sand + shale streaks
75-86 sand
86-92 shale + sd streaks
92-100 grey shale

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf. Slotted, etc. Screen Mgr., if commercial	Setting (ft.)		Gage Casing Screen
			From	To	
<u>4 1/2 ID</u>		<u>slotted</u>	<u>0</u>	<u>100</u>	
			<u>100</u>	<u>80</u>	
			<u>60</u>	<u>40</u>	

9) CEMENTING DATA [Rule 319.44(b)]

Cemented from 30 ft. to 0 ft.
Method used Grout Tube
Cemented by MPSR

10) SURFACE COMPLETION

☐ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

extended casing to control flow

11) WATER LEVEL:

10' Above surface
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS:

Type Depth

13) TYPE PUMP:

☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

15) WATER QUALITY:

Did you knowingly penetrate any strata which contained undesirable water? ☒ Yes ☐ No

If yes, submit "REPORT OF UNDESIRABLE WATER"

Type of water? oil Depth of strata 19-22

Was a chemical analysis made? ☐ Yes ☐ No

14) WELL TESTS:

Type Test: ☐ Pump ☒ Bailor ☐ Jetted ☐ Estimated
Yield: 20 gpm with 40 ft. drawdown after 1 hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log/s being returned for completion and resubmittal.

COMPANY NAME Mosec Drilling
(Type or Print)

Water Well Driller's License No. 2386

ADDRESS At-L Box 557
(Street or RFD)

Pottshoro
(City)

TX
(State)

(Zip)

(Signed) Ronnie Ables
(Licensed Water Well Driller)

(Signed) _____
(Registered Driller Trainee)

For TDWR use only
Well No. _____
Located on map _____

Please attach electric log, chemical analysis, and other pertinent information, if available.

Please use black ink.
Send original copy by
certified mail to the
Texas Department of Water Resources
P. O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

ATTENTION OWNER: Confidentiality Privilege Notice on Reverse Side

OWNER W. J. Smith Wood Pres Address Denison Tx 7502
(Name) (Street or RFD) (City) (State) (Zip)

LOCATION OF WELL:
County Grayson miles in _____ direction from _____
(N.E., S.W., etc.) (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:

Section No. _____ Block No. _____ Township _____

Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☐ See attached map.

3) TYPE OF WORK (Check):

☒ New Well ☐ Deepening
☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):

☐ Domestic ☐ Industrial ☐ Public Supply
☐ Irrigation ☒ Test Well ☐ Other _____

5) DRILLING METHOD (Check):

☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored
☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

DIAMETER OF HOLE
Dia. (in.) From (ft.) To (ft.)

Date drilled 10-25-85

8	Surface	105
---	---------	-----

7) BOREHOLE COMPLETION:

☐ Open Hole ☐ Straight Well ☐ Underreamed
☒ Gravel Packed ☐ Other _____

If Gravel Packed give interval ... from 45 ft. to 105

From (ft.)	To (ft.)	Description and color of formation material
0-5		sandy soil
5-16		clay
16-20		clay + oil
20-25		lime
25-36		shale + sand streaks
36-38		oil shale + sand
38-45		shale + sand streaks
45-83		shale
83-105		sand streaks + shale

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., slotted, etc. Screen Mfg., if commercial	Setting (ft.)		Gag Case Score
			From	To	
4 1/2	IN		0	105	
		slotted	105	65	

9) CEMENTING DATA (Rule 319.44(b))

Cemented from 45 ft. to 0 ft.

Method used great tube

Cemented by Masec

10) SURFACE COMPLETION

☐ Specified Surface Slab Installed (Rule 319.44(c))
☐ Pitless Adapter Used (Rule 319.44(d))
☐ Approved Alternative Procedure Used (Rule 319.71)

11) WATER LEVEL:

Static level OT 1 GIVE ft. below land surface Date 10-25-85
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

13) TYPE PUMP:

☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder

☐ Other _____

Depth to pump bowls, cylinder, jet, etc., _____ ft.

15) WATER QUALITY:

Did you knowingly penetrate any strata which contained undesirable water? ☒ Yes ☐ No

If yes, submit "REPORT OF UNDESIRABLE WATER"

Type of water? oil Depth of strata 36-38

Was a chemical analysis made? ☐ Yes ☐ No

14) WELL TESTS:

Type Test: ☐ Pump ☒ Bailor ☐ Jetted ☐ Estimated

Yield: 20 gpm with 30 ft. drawdown after 1 hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

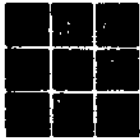
COMPANY NAME Mosec Drilling Water Well Driller's License No. 2386
(Type or Print)

ADDRESS RT 1 Box 557 Pottsboro TX
(Street or RFD) (City) (State) (Zip)

(Signed) Ronnie Mosec (Signed) _____
(Licensee Water Well Driller) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TDWR use only
Well No. _____
Located on map _____



ALBERT H. HALFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

ALBERT H. HALFF, CHAIRMAN OF BOARD
JOSE I. NOVOA, PRESIDENT
RAUL WONG, JR., SENIOR VICE PRESIDENT
DON O. BROCK, VICE PRESIDENT
MICHAEL K. KOESLING, VICE PRESIDENT
TROY LYNN LOVELL, VICE PRESIDENT
WALTER E. SKIPWITH, SECRETARY
GEORGE PRALL, JR.
JEFFREY H. JACOB
DAVID S. MORGAN
MARTIN J. MOLLOY

DALLAS • FT. WORTH • HOUSTON

8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225
214/738-0084

November 8, 1985
AVO 7964

U. S. Environmental Protection Agency
Hazardous Wastes Management Division
InterFirst Two Building - 28th Floor
1201 Elm Street
Dallas, Texas 75270

Att: Mr. William Rhea (6H-HO)

Re: Certificate of Compliance
W. J. Smith Wood Preserving Company

Dear Mr. Rhea:

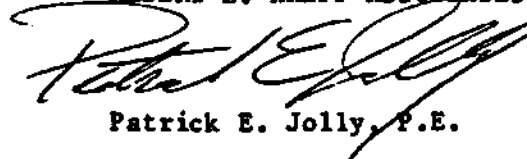
This firm has acted as environmental consultants for W. J. Smith Wood Preserving Company (EPA #TXD066368879) located at Denison, Texas. I certify that the Hazardous Waste Management (HWM) Facility is in compliance with all applicable State ground-water monitoring requirements and the closure/post closure financial responsibility requirements which are part of the State's authorized hazardous waste program under Section 3006 of RCRA.

The facility has been unable, despite a documented good faith effort, to obtain sudden/non-sudden environmental impairment liability insurance. The policy is expected to be issued by American International Group and an environmental risk assessment by Pilko and Associates, Inc. has been completed.

As the consultant for W. J. Smith Wood Preserving Company located at Denison, Texas, I knowingly and willfully make this true and accurate certification to the United States Environmental Protection Agency pursuant to Section 3005(e) of the Hazardous and Solid Waste Disposal Act, as amended.

Yours very truly,

ALBERT H. HALFF ASSOCIATES, INC.



Patrick E. Jolly, P.E.

PEJ/kb

ATTACHMENT NO. 2

FACILITY CERTIFICATION STATEMENT

CERTIFICATION STATEMENT

Bill Redding

President

(Name)

(Title of Owner or Operator)

certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I further certify that in accordance with Section 3005(e) of the Resource Conservation and Recovery Act, as amended, the subject land disposal unit(s) are in compliance with all applicable ground-water monitoring and financial responsibility requirements of 31 TAC Sections 335.191-335.195 and 335.231-233. I am aware that there are significant penalties for submitting false information, including the possibility of civil penalty, criminal fines and imprisonment.

Signature: Bill Redding Date: Nov 14, 1985

From TDWR PART B Permit Application

ATTACHMENT NO. 3
EPA INSPECTION REPORT EXCERPTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 2/3/86

SUBJECT: Transmittal Memo - Compliance Monitoring Inspection Report

FROM: Don Weinmann (Inspector)TO: Dave Peters, Chief DWP 2/3/86
Hazardous Waste Section (6ES-SH)A compliance monitoring inspection was conducted on 1/31/86
Date(s)

at the following location:

Name: W. J. Smith Wood Processing CompanyAddress: 1700 West Morton St. Denham Tx. 75020EPA I.D. Number: TXD066368879 NPDES Permit No. _____Type of inspection: Joint () Lead (X)
Type of facility: Federal () Municipal () Nonmunicipal (X)

Compliance Monitoring Reports Attached: TSCA () RCRA (X)

Comments:

The operator has certified compliance with ground
water monitoring regulations but has not certified
financial assurance.

RCRA INSPECTION

I. SITE IDENTIFICATION

A. Site Name

B. Street (or other identifier)

W. J. Smith Wood Preserving Co

1700 West Morton St

C. City

D. State

E. Zip Code

F. County Name

Denison

TX

75020

Grayson

G. Site Operator Information

1. Name

2. Telephone Number

Same as above

(214) 465-6161

3. Street

4. City

5. State

6. Zip Code

H. Site Description

Railroad tie manufacturing company (Crescent)

I. Latitude (deg.-min.-sec.)

Longitude (deg.-min.-sec.)

J. Type of Ownership

___ 1. Federal

___ 2. State

___ 3. County

___ 4. Municipal

☒ 5. PrivateK. ☒ 1. Generator ___ 2. Transporter ☒ 3. Treatment ☒ 4. Storage ___ 5. Disposal

INSPECTION INFORMATION

A. Principal Inspector Information

1. Name

2. Title

Dave Wiseman

RCRA Inspector

3. Organization

4. Telephone No. (area code & No.)

US EPA

(214) 767-9769

B. Inspection Participants

A.L. Redding - President of W.J. Smith

Date 2/3/86
Site W. J. Smith
I.D.# TXD 066368879

Active RCRA Units

Water treatment unit - Storm runoff water and excess water removed in the creosoting process are being treated at the facility. The water runs through a separator which removes the heavy oil (creosote) which is recycled. Then the water runs into a surface impoundment (retention basin) and is then pumped to the trickling filter treatment towers and then discharged. The discharge (approximately 50,000 gpd) to Duck Creek Treatment Plant is regulated by the City of Denison at the 5 ppm level for phenols.

Drying beds - The dead bacteria from the trickling filter system is placed in drying beds to remove the water. This unit has been in operation since 1971 and to date the material present has not required removal for disposal. Application to the drying beds occurs twice a year with a total volume of approximately 1 thousand gallons/yr. An analysis of phenol content has not been performed.

Date 2/3/86

Site W.J. Smith

I.D.# IKD 066368879

Partially closed RCRA units.

One surface impoundment is partially closed. The sludge and sediments have been removed and shipped to Chemical Waste Management (Carlsbad, CA). The impoundment basin still remains, awaiting final closure with the consent of TWC.

Seven lagoons were located on MKT railroad property west of W.J. Smith. These lagoons were operated by W.J. Smith to store excess sludge from the creosoting process. The lagoons have been closed. The sludge in the lagoons was placed in a clay lined cell on-site. The water in the lagoons was removed and treated by W.J. Smith.

The on-site cell was covered with a clay cap and grasses have been planted on the cover soil.

Date 2/3/86
Site W.J. Smith
I.D.# TXD066368879

Violations

While the operator has offered ground-water monitoring certification, they have not certified financial assurance and continue to operate the RCRA regulated units. The operator has written a letter of "good faith" to verify their search for an insurance company - see the attached letter.

Photos of the RCRA regulated units will follow in an addendum along with the part B application and appropriate checklist (closure + post-closure).

I will check with TWC to verify closure activities at the facility.

W.J. Smith Wood Preserving Co.
RCRA Loss of Interim Status Checklist

1. Does facility have an EPA Identification No.?

☒ Yes ☐ No

A. If yes, EPA I.D. No.: TXD066-368879

B. If no, explain: NA

2. Describe all hazardous waste management units at the facility by completing the attached table. *See attached narrative and table.*

3. Obtain all manifests from the period 3-6 months prior to November 8, 1985, (if the number exceeds 20 or copying service is not available, complete the attached table in lieu of copying manifests). Also obtain copies of the manifests generated after November 8, 1985. Complete the manifest portion of the Generator Checklist (Section C). For an additional manifest violations on a separate sheet. *See attached manifest.*

4. Does the facility have a groundwater monitoring system? ☒ Yes ☐ No

If yes, complete the appropriate sections of the Ertec Checklist.

If no, explain in narrative. *A part B application was requested from the generator. Ground water information will follow in an addendum.*

5. Has the facility received waste from offsite since November 19, 1980?

☐ Yes ☒ No

- Since November 8, 1985?

☐ Yes ☒ No

If yes, to either question describe the treatment, storage or disposal practices.

6. Have closure activities begun at the facility?

☒ Yes ☐ No

See attached narrative.
If yes, list the unit or units and complete the closure checklist and post/closure checklist if applicable. If possible, please attach a copy of the closure plan. *Closure plans will follow in an addendum.*

The closure plan is included in the part B. The post-closure care is not addressed.

7. Note in a narrative any evidence of the facility placing hazardous waste in unit(s) that have lost interim status. Document with photographs, if possible.

Photographs will follow in an addendum

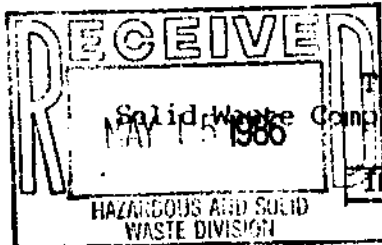
Date 2/3/86

Table I
Facility: W.S. Smith
TRD066.368879

[illegible]

ATTACHMENT NO. 4

TWC INSPECTION REPORT EXCERPTS

TWC Reg. No. 31372

C.O. Use Only

5-86 586TWC Dist. 4EPA ID No. TX0066368879COMMERCIAL WASTE Facility GOVT. Facility NAME OF COMPANY W.J. Smith Wood Preserving Co.MAILING ADDRESS P.O. Box 703 / Denison, Texas 75020 Tel. 214-465-6161SITE LOCATION 1700 West Morton Street / Denison, TX Tel. 214-465-616COUNTY Grayson TYPE OF INDUSTRY Wood PreserverGENERATOR CLASSIFICATION: Industrial ☒ Municipal

Part A Application submitted to the State? Yes ☒ No To EPA? Yes No ☒
 Affidavit of Exclusion submitted to the State? Yes No ☒
 Was a written exclusion granted by TWC? Yes No ☒ If yes, Date
 Will this facility require a permit? Yes ☒ No

CURRENT WASTE MANAGEMENT (Haz.-"H", Class I NonHaz.-"NH", Class II-"II", Class III-"III")

Generator H, NH, II Treatment Storage H, II Disposal H, NH, II Transporter HW Exemptions (check): 90-Day Storage Other *SQG : Total HW Generation Per Month: <100 kg. 100-1000 kg. H W Facilities (circle appropriate codes): C T (SI) WP LT LP I TT TR WDW ON H Facilities (circle appropriate codes): C T (SI) WP LT (LP) (I) TT TR WDW O

Anomalies in the above information will be addressed by: (a) Enforcement in progress ☒
 (b) Central Office ☒, (c) District Office , (d) Owner/Operator .

Type of Inspection (circle): (EV) EB EC (CL) GW SA CD FD OT FE SQ S

646

Inspector's Name and Title Gerardo H. Garcia - Environmental Quality SpecialistInspection Participants Billy L. Redding - President / Al Petrasek - P.O., P.I.Date(s) of Inspection 4-11-86Approved: Don C. [Signature]
District ManagerSigned: Gerardo H. Garcia 5-9-86
Inspector Date

* SQG- Small quantity generator, <1000 kg. of hazardous waste per month.

* If a required Checklist is omitted, explain: _____

GENERATORS CHECKLISTion A - Notification and Waste Determination (335.6, .62, .63)

**

1. Has generator completed an appropriate hazardous waste determination for each solid waste produced? YES ☒ NO ☐
2. Check the method used for determination :
- a. Listed as a hazardous waste in 40 CFR Part 261, Subpart D. ☒
 - b. Process or materials knowledge. ☐
 - c. Tested for characteristics as identified in 40 CFR Part 261, Subpart C (If equivalent test method is used, attach a copy). ☐
- NOTE: If a hazardous determination has not been made or appears to be incorrect, the inspector should obtain a sample of the waste for analysis and explain in comments.
3. Has the facility received an EPA ID number? N/A ☐ YES ☒ NO ☐
4. Is notification of waste streams generated correct? YES ☒ NO ☐
5. Do all waste management (TSD) methods in use agree with Registration? YES ☐ NO ☒
CH 6
6. Does this facility generate, treat, store, or dispose of PCB wastes? YES ☐ NO ☒
If yes, describe storage and disposition:
- _____
- _____

7. Does this facility generate used oils ? YES ☐ NO ☒
If yes, describe storage and disposition:
- _____
- _____
8. Does this facility generate spent solvents ? YES ☐ NO ☒
If yes, describe storage and disposition:
- _____
- _____
9. Does this facility utilize sumps in the management of hazardous waste? If yes, describe use: YES ☐ NO ☒
- _____
- _____

*** An entry in this column indicates corrective action/response is needed

Section B - Special Conditions (335.75)

1. If generator has received from or transported to a foreign entity any hazardous waste, has the appropriate notice been filed with the EPA Regional Administrator? N/A ☒ YES ☐ NO
2. Was the waste manifested and signed by the foreign consignee? N/A ☒ YES ☐ NO
3. Has confirmation of waste transport out of the country been received by the generator? N/A ☒ YES ☐ NO

Section C - Recordkeeping and Reporting (335.9, .10, .13, .70-71)

1. Does the generator maintain the following records and reports (if applicable) for the necessary three years?
 - a. Shipping Manifests N/A ☐ YES ☒ NO
 - b. Monthly off-site shipment summaries N/A ☐ YES ☒ NO
 - c. Monthly on-site land disposal summaries N/A ☒ YES ☐ NO
 - d. Tests and analyses N/A ☐ YES ☒ NO
 - e. Annual reports N/A ☒ YES ☐ NO
2. Has generator submitted exception reports to TWC for any original (white) copies of manifests not received back? N/A ☒ YES ☐ NO
3. Have any spills, unauthorized discharges or threats of such discharges occurred? YES ☐ NO ☒
If yes, have they been reported?(335.4, .453). N/A ☒ YES ☐ NO
Have they been remedied?(335.453) Explain. N/A ☒ YES ☐ NO

+++ IF GENERATOR DISPOSES OF WASTES ON-SITE ONLY, WRITE N/A IN SECTION D+++

Section D - Pretransport and Manifest Requirements (335.61-68)

1. Identify primary off-site disposal facilities:
Chemical Waste Management - Carlyss,
Louisiana
2. Are off-site disposal facilities permitted or operating under interim status standards? N/A ☐ YES ☒ NO
3. Are TWC manifests properly completed? N/A ☐ YES ☒ NO

+++ STOP & SIGN HERE IF FACILITY QUALIFIES AS A SMALL QUANTITY GENERATOR +++
Signed: _____

Section D - (Continued)

- | | | | |
|---|-----|---|-----------------------------|
| 4. Do containers used to hold waste(s) meet DOT packaging requirements (49 CFR Parts 173, 178, 179) before being offered for transport (if circumstances observed)? | N/A | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| 5. Does generator label and mark each package in accordance with 49 CFR Part 172 (if circumstances observed)? | N/A | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| 6. Is each container of 110 gallons or less marked with the required hazardous waste warning label? | N/A | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| 7. Does generator placard off-site waste shipments in accordance with DOT regulations (49 CFR Part 172, Subpart F)? (if circumstances observed) | N/A | <input type="checkbox"/> YES | <input type="checkbox"/> NO |

Section E - Accumulation Time Exemption (375.69)

Note: A facility may accumulate and store hazardous wastes in containers or tanks for up to 90 days without a permit.

- | | | | |
|--|-----|---|-----------------------------|
| 1. Is the beginning date of Accumulation Time clearly indicated on each container? | N/A | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| 2. Is each container or tank clearly labeled or marked with the words "Hazardous Waste"? | N/A | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |

Note: Attach a Container Storage Area Checklist for each container storage area.

Note: Attach a Tanks Checklist for each tank or each group of similar tanks.

Note: If this is a T/S/D Facility, proceed to General Facilities Checklist.

COMMENTS SHEET

Section A 15 The company's registration does not include a retention/egalization basin, sludge drying beds, earthen separator, concrete separator NO.1, concrete separator NO.2, trickling filter towers, concrete clarifier, lagoons, disposal pits and mounds, and a sludge decant tank as on-site waste management facilities.

Section 1

Section 1

Section 1

GENERAL FACILITIES CHECKLIST

Section A - General Site Information

1. Are any solid waste facilities located in the 100-year floodplain? YES ___ NO ☒
If yes, explain.
2. Describe land use within one mile residential, industrial, and commercial
3. Are there any closed or abandoned solid waste facilities? YES ___ NO ☒
If yes, explain.
4. Has proof of deed recordation of all on-site solid waste disposal facilities been provided to the agency? N/A ___ YES ___ NO ☒
If no, explain.
5. Are all non-RCRA solid waste facilities compliant with the general prohibitions contained in TAC 335.4? N/A ___ YES ☒ NO ___
If no, explain.
6. An up-to-date Plant Map showing site orientation, waste management facilities, and major topographic features should be attached. Each facility checklist should have a Facility Map or Sketch attached.

+++ Note: For all non-RCRA facilities, do not complete the remainder of this General Facilities Checklist. Proceed to the individual facility checklists. +++

Section B - Personnel Training (335.117)

- | | |
|--|--|
| 1. Owner/operator maintains proper personnel training records at the facility. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |
| 2. Personnel training records include: | |
| a. Job title and written job description of each position. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |
| b. Description of type and amount of training. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |
| c. Records of training given to facility personnel. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |
| 3. Personnel training records are maintained for the appropriate length of time. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |
| 4. Training program is adequate for response to emergencies. | N/A ___ YES ___ NO <input checked="" type="checkbox"/> |

*** An entry in this column indicates corrective action/response is needed.

Section C - Preparedness and Prevention (335.131-137)

1. Describe any evidence of fire, explosion, or contamination of the environment in the comments sheet.
2. Facility is equipped with:
- a. Internal communication or alarm system within easy access. N/A ☐ YES ☒ NO ☐
 - b. Telephone or two-way radio to call emergency response personnel. N/A ☐ YES ☒ NO ☐
 - c. Portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment are tested regularly to assure proper operation. N/A ☐ YES ☒ NO ☐
 - d. Available water supply volume and pressure are adequate for hoses, sprinklers or water spray system. N/A ☐ YES ☒ NO ☐
3. Aisle space is sufficient to allow unobstructed movement of personnel and equipment. N/A ☐ YES ☒ NO ☐
4. Owner/operator has attempted to make arrangements with the local response authorities to familiarize them with the layout of the facility, properties of hazardous wastes handled and associated hazards, work locations of facility personnel, entrances to facility roads and possible evacuation routes. N/A ☐ YES ☐ NO ☒
5. In the event that more than one law enforcement or fire department might respond, a primary authority has been designated. N/A ☐ YES ☐ NO ☐
6. Owner/operator has attempted to reach agreements with State emergency response teams, emergency response contractors and equipment suppliers. N/A ☐ YES ☐ NO ☐
7. Owner/operator has attempted to make arrangements with local hospitals to familiarize them with the properties of the hazardous wastes handled and the types of injuries that could result from fires, explosions or releases from the facility. N/A ☐ YES ☐ NO ☐
8. State or local authorities have entered into the necessary arrangements. N/A ☐ YES ☐ NO ☒

Section D - Contingency Plan and Emergency Procedures (335.151 - .157)

1. A contingency plan is maintained at the facility. N/A ☐ YES ☒ NO ☐
2. The contingency plan is:
- a. a revised SPCC plan ☐
 - b. a separate document ☐
 - c. adequate to meet emergency procedures requirements. N/A ☐ YES ☐ NO ☒
3. Emergency coordinator is on site or on call at all times. N/A ☐ YES ☒ NO ☐

*** STOP HERE IF FACILITY ACCUMULATES WASTE ON SITE FOR LESS THAN 90 DAYS ***

Section E - Waste Analysis (335.114)

Facility has a waste analysis plan.

N/A ☐ YES ☒ NO ☐

2. Waste analysis plan is maintained at the facility.

N/A ☐ YES ☒ NO ☐

3. Waste analysis plan includes the following:

a. Parameters for which each waste will be analyzed.

N/A ☐ YES ☒ NO ☐

b. Test methods used to test for these parameters.

N/A ☐ YES ☒ NO ☐

c. Sampling method used to obtain sample.

N/A ☐ YES ☒ NO ☐

d. Frequency with which the initial analysis will be reviewed or repeated.

N/A ☐ YES ☐ NO ☒

Note: Frequency includes the requirement to repeat analysis whenever waste stream or process is changed.

e. Waste analyses that generators have agreed to provide.

N/A ☒ YES ☐ NO ☐

f. For off-site disposal facilities, the procedures which are used to inspect and analyze each movement of hazardous waste, including:

1) Procedures to be used to determine the identity of each movement of waste.

N/A ☒ YES ☐ NO ☐

2) Sampling method to be used to obtain a representative sample of the waste to be identified.

N/A ☒ YES ☐ NO ☐

Section F - Security (335.115)

1. The facility provides adequate security.

N/A ☐ YES ☒ NO ☐

a. ☒ 24-hour surveillance system, OR

b. ☐ Artificial and/or natural barrier around facility, AND

Describe: _____

c. ☐ Means to control access through entrances.

Describe: _____

Facility has a sign with the legend "Danger - Unauthorized Personnel Keep Out".

"Danger-Private
Property"

N/A ☐ YES ☒ NO ☐

Section G - General Inspection Requirements (335.116)

1. Facility has a written inspection plan and schedule.	N/A	YES	NO	<input checked="" type="checkbox"/>
2. Inspection plan is maintained at the facility.	N/A	YES	NO	<input type="checkbox"/>
3. Plan and schedule provide for the inspection of the following:				
a. Monitoring equipment	N/A	YES	NO	<input type="checkbox"/>
b. Safety and emergency equipment	N/A	YES	NO	<input type="checkbox"/>
c. Security devices	N/A	YES	NO	<input type="checkbox"/>
d. Operating and structural equipment.	N/A	YES	NO	<input type="checkbox"/>
4. Schedule or plan identifies the types of problems to be looked for during the inspection.	N/A	YES	NO	<input type="checkbox"/>
a. Malfunction and deterioration	N/A	YES	NO	<input type="checkbox"/>
b. Operator error	N/A	YES	NO	<input type="checkbox"/>
c. Discharge or threat of discharge	N/A	YES	NO	<input type="checkbox"/>
5. Owner/operator maintains an inspection log which includes:				
a. Date and time of inspection	N/A	YES	NO	<input type="checkbox"/>
b. Name of inspector	N/A	YES	NO	<input type="checkbox"/>
c. Notation of observations	N/A	YES	NO	<input type="checkbox"/>
d. Date and nature of repairs and remedial action.	N/A	YES	NO	<input type="checkbox"/>
6. Malfunctions or other deficiencies noted in the inspection log have been rectified.	N/A	YES	NO	<input type="checkbox"/>
7. Inspection log records are maintained for three years.	N/A	YES	NO	<input checked="" type="checkbox"/>

Section H - Requirements for Ignitable, Reactive or Incompatible Wastes (335.118)

1. Owner/operator is familiar with the proper separation and safeguards needed to prevent ignition or reaction of wastes. N/A ☒ YES ☐ NO ☐
- a. Use comments sheet to describe separation and confinement procedures.
- b. Use comments sheet to describe any potential sources of ignition or reaction.
2. Smoking and open flame are confined to specifically designated smoking areas. N/A ☒ YES ☐ NO ☐
3. "No Smoking" signs are posted in hazardous areas. N/A ☒ YES ☐ NO ☐

Section I - Manifest System, Recordkeeping and Reporting (335.171 - .177)

1. Owner/operator complies with the manifest requirements. N/A ☐ YES ☒ NO ☐
- Note: If #1 is not applicable (N/A), go to #6.
2. Waste received from a rail or water (bulk shipment) transporter are accompanied by a properly executed shipping paper. N/A ☒ YES ☐ NO ☐
3. All shipments of wastes received have been consistent with the manifests. N/A ☒ YES ☐ NO ☐
4. Unmanifested wastes are reported to the Executive Director. N/A ☒ YES ☐ NO ☐
5. Discrepancies have been reconciled with the generator and transporter. N/A ☒ YES ☐ NO ☐
6. Owner/operator keeps a written operating record at the facility. N/A ☐ YES ☐ NO ☒
7. Operating record reflects the following:
- a. Description and quantity of each hazardous waste received and methods and date of treatment/storage/disposal at the facility. N/A ☐ YES ☐ NO ☒
- b. Location and quantity of each hazardous waste within the facility. N/A ☐ YES ☐ NO ☒
- c. Records and results of waste analyses and trial tests. N/A ☐ YES ☒ NO ☐
- d. Summary reports of all incidents that require implementation of the emergency contingency plan. N/A ☒ YES ☐ NO ☐
- e. Closure cost estimates for all facilities. N/A ☐ YES ☒ NO ☐
- f. Post-closure cost estimates for all disposal facilities. N/A ☒ YES ☐ NO ☐

Section J - Financial Assurance (335.233)

1. Preinspection call to Central Office confirms that facility has submitted current financial assurance documentation.

N/A YES NO ✓
6/16

2. If yes, indicate the documents submitted and their respective values:

NO Sudden Liability - Amount: \$ _____ per occurrence, \$ _____ annual.

NO Non-sudden Liability - Amount: \$ _____ per occurrence, \$ _____ annual.

✓ Closure Assurance - Amount: \$ 60,000.00

N Post Closure Assurance - Amount: \$ _____

N/A Corrective Action - Amount: \$ _____

3. Financial Assurance Officer reports that documentation is adequate.

N/A YES NO ✓

If no, describe deficiencies:

No sudden or non-sudden liability
insurance or post closure assurance

TWC Solid Waste Inspection Report

TWC Reg. No. 31332Reg. Facility NO. Surface Impoundment Checklist

Inactive
Undergoing RCRA closure

Class of Waste (H)Use of Impoundment (check): Treatment Storage Disposal ✓Type of Waste: Creosote wastewater treatment sludgeType of Liner: NONEIs there a Leachate Collection and removal system? YES NO ✓

Does owner/operator intend to "clean close" the impoundment at Closure? YES ✓ NO
(i.e., remove all hazardous liquids and sludges) The operator does not know when a clean closure is feasible.

A. General Operating Requirements and Containment System

1. Is there at least 2 ft. (60 cm) of freeboard? YES ✓ NO
2. Is there evidence of overtopping of the dikes? NO ✓ YES
3. Is there evidence of dike seepage, erosion or instability? NO ✓ YES
4. Do earthen dikes have protective cover to minimize erosion? N/A ✓ YES NO

B. Waste Analysis and Trial Tests

1. Is the impoundment used to treat or store different wastes? YES NO ✓

If Yes:

- a. Are waste analyses and trial treatment or storage tests done on these different wastes?
or
Is there written, documented information on similar treatment or storage of similar wastes? N/A ✓ YES NO
- b. Are records available of these waste analyses in the operating record? N/A ✓ YES NO

C. Inspections

1. Is the impoundment freeboard inspected daily? YES ✓ NO
2. Is the impoundment, dike and surrounding vegetation inspected weekly for leaks, deterioration or failures? YES ✓ NO

*** An entry in this column indicates corrective action/response is needed

D. Special Requirements

1. Are ignitable or reactive wastes placed in the impoundment?

YES ___ NO ☒

If Yes:

a. Are they rendered non-ignitable or non-reactive

b. Protected from or sources of ignition or reaction?

N/A ☒ YES ___ NO ___

NOTE: N/A if impoundment is used solely for emergencies.

2. Is the impoundment is used to hold incompatible wastes?

YES ___ NO ☒

If Yes, are they handled in accordance with 40CFR 265.17?

N/A ☒ YES ___ NO ___

(i.e., so as to prevent violent reactions, toxic or flammable gases, damage to the impoundment, or threat to humans or the environment)

E. Ground Water Monitoring

1. Does the impoundment have a RCRA groundwater monitoring system?

N/A ___ YES ☒ NO ___

F. HSWA Requirements

1. Is the impoundment a "new unit",
a replacement of an existing unit,
or a lateral expansion of an existing unit?

YES ___ NO ☒

If Yes:

a. Has impoundment received haz. waste since May 1985?

N/A ☒ YES ___ NO ___

b. Does the impoundment have two or more liners and
a leachate collection system between such liners?

N/A ☒ YES ___ NO ___

Capacity & Dimensions: Unknown - The impoundment has been
emptied of all residual contamination.

Comments: _____

* A surface impoundment that first received hazardous waste after Nov. 8, 1984.

Surface Impoundment ChecklistPre-RCRA LagoonsClass of Waste (NH)Use of Impoundment (check): Treatment Storage Disposal ✓Type of Waste: Creosote sludgeType of Liner: NONEIs there a Leachate Collection and removal system? YES NO ✓Does owner/operator intend to "clean close" the impoundment at Closure? YES ✓ NO
(i.e., remove all hazardous liquids and sludges)A. General Operating Requirements and Containment System

1. Is there at least 2 ft. (60 cm) of freeboard? YES ✓ NO
2. Is there evidence of overtopping of the dikes? NO ✓ YES
3. Is there evidence of dike seepage, erosion or instability? NO ✓ YES
4. Do earthen dikes have protective cover to minimize erosion? N/A ✓ YES NO

B. Waste Analysis and Trial Tests

1. Is the impoundment used to treat or store different wastes? YES NO ✓

If Yes:

- a. Are waste analyses and trial treatment or storage tests done on these different wastes?
or
Is there written, documented information on similar treatment or storage of similar wastes? N/A ✓ YES NO

- b. Are records available of these waste analyses in the operating record? N/A ✓ YES NO

C. Inspections

1. Is the impoundment freeboard inspected daily? N/A ✓ YES NO
2. Is the impoundment, dike and surrounding vegetation inspected weekly for leaks, deterioration or failures? ↓ YES NO

*** An entry in this column indicates corrective action/response is needed

D. Special Requirements

1. Are ignitable or reactive wastes placed in the impoundment?

YES ___ NO ☒

If Yes:

a. Are they rendered non-ignitable or non-reactive

OR

b. Protected from sources of ignition or reaction?

N/A ☒ YES ___ NO ___

NOTE: N/A if impoundment is used solely for emergencies.

2. Is the impoundment is used to hold incompatible wastes?

YES ___ NO ☒

If Yes, are they handled in accordance with 40CFR 265.17?

N/A ☒ YES ___ NO ___

(i.e., so as to prevent violent reactions, toxic or flammable gases, damage to the impoundment, or threat to humans or the environment)

E. Ground Water Monitoring

1. Does the impoundment have a RCRA groundwater monitoring system?

N/A ☒ YES ___ NO ___

F. HSWA Requirements

1. Is the impoundment a "new unit",
a replacement of an existing unit,
or a lateral expansion of an existing unit?

YES ___ NO ☒

If Yes:

a. Has impoundment received haz. waste since May 1985?

N/A ___ YES ___ NO ☒

b. Does the impoundment have two or more liners and
a leachate collection system between such liners?

N/A ___ YES ___ NO ☒

Capacity & Dimensions:

See diagram

Comments:

PRE-RCRA Lagoons in the process of
being closed

* A surface impoundment that first received hazardous waste after Nov. 8, 1984.

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report Landfills Checklist (Rule 335.341-.348)

Class of Waste (NH)

1. Is run-on diverted from the landfill?
(Effective November 19, 1981) Yes ☒ No ☐
2. Is run-off from the landfill collected?
(Effective November 19, 1981) Yes ☐ No ☒
 - a. Is this waste analyzed to determine if it is a hazardous waste? N/A ☒ Yes ☐ No ☐
 - (1) If it is a hazardous waste, how is it managed? (Use narrative explanations sheet)
 - (2) Is the collected run-off discharged through a point source to surface waters? Yes ☐ No ☐
 - (a) If Yes, list WQ Permit Number _____
- **3. Is the landfill managed so that wind dispersal is controlled? (Note: blowing debris) Yes ☒ No ☐
4. Do records indicate that reactive or ignitable wastes are placed in the landfill? Yes ☐ No ☒
 - a. If Yes, is it treated, rendered or mixed before or immediately after placement in the landfill so it is no longer reactive or ignitable? N/A ☒ Yes ☐ No ☐
 - b. Describe treatment, etc., or attach a copy of treatment.
5. Do records indicate that incompatible wastes are placed in separate landfills? N/A ☒ Yes ☐ No ☐
6. Do records indicate that bulk or non-containerized liquid wastes or wastes containing free liquids are placed in the landfill? (Effective November 19, 1981) Yes ☐ No ☒
 - a. If Yes, is the liquid waste treated chemically or physically, so no free liquids are present? N/A ☒ Yes ☐ No ☐
7. Do records indicate that containers holding liquid wastes are placed in the landfill? Yes ☐ No ☒
 - a. If Yes, is the container designed to hold liquids for a use other than storage? (e.g. battery, capacitor) (Effective November 19, 1981) Yes ☐ No ☐

TDWR-

Page 1 of 30 of Group II

*(Changed 9/10/82, added *** note and response columns realigned)

**Note checklist questions to be noted or completed during on-site inspection

***No in this response column indicates noncompliance; yes indicates use of questionable management practice(s).

8. Do the landfills have the following:

- a. A liner? Yes___ No ☒
- b. If Yes, what type? _____
- c. For each landfill indicate active or inactive status _____
- d. A leachate collection and removal system? Yes___ No ☒
- (1) If Yes, has leachate generation been detected? Yes___ No___
- (2) If Yes, provide volumes and dates that leachate has been removed

- (3) How is leachate disposed? _____

9. Do records indicate that empty containers are placed in the landfill?

Yes___ No ☒

a. If Yes, are they reduced in volume (e.g. shredded, crushed)? (Effective November 19, 1981)

Yes___ No___

**10. Is there evidence of site instability? (e.g. erosion, settling)?

No ☒ Yes___

**11. Is there evidence of ponding of water on-site?

No ☒ Yes___

**12. Is there any indication of improper or inadequate drainage?

No ☒ Yes___

13. Are monitor wells required for this site? (Refer to Rule 335.191-.195 - Ground Water Monitoring)

Yes___ No ☒

a. If Yes, has owner/operator installed, operated and maintained a ground water monitoring system (unless waived) prior to 11/19/81?

Waived

Date

Yes___ No ☒

14. Describe landfill(s) site and indicate sketch location(s) and designation(s). Also describe waste streams disposed in each landfill: See diagram

Note 1: Attach Ground Water Monitoring Report if answer to Question 13 is yes.

TDWR-

Page 2 of 30 of Group II

*(Changed 9/10/82, added *** note and columns realigned)

**See Note on Page 1

INDUSTRIAL SOLID WASTE

*Closure and Post-Closure Compliance Review Checklist
(TAC Section 335.211-.220)

NO CLOSURE PLAN **

Note: List each type of hazardous waste I, S, D facility, number and volume in the comments sheet.

1. CLOSURE PLAN; Is there a written plan?

Yes ___ No ✓

1. Does the plan identify the *MAXIMUM EXTENT OF OPERATION which will be unclosed during the life of the facility?

Yes ___ No ___

*Note: The rules [335.213(a)(1)] require that the closure plans identify the maximum extent of the operation which will be unclosed during the life of the facility. If the plan is based on the expected extent of operations to be closed just prior to closure, it is important to consider whether that represents the "maximum" in this question.

2. Does the plan identify the steps for PARTIAL and/or COMPLETE CLOSURE [335.213(a)], at any time during the intended operating life, of

a. surface impoundments?

N/A ___ Yes ___ No ___

b. landfills?

N/A ___ Yes ___ No ___

c. tanks?

N/A ___ Yes ___ No ___

d. other (specify: _____)

Yes ___ No ___

3. Is there an estimate of the MAXIMUM INVENTORY of wastes in storage or treatment at any time during the life of the facility?

N/A ___ Yes ___ No ___

4. Does the plan clearly identify the STEPS TO CLOSE [335.213(a)]?

a. at any point during the intended operating life?

Yes ___ No ___

b. at the end of the intended operating life?

Yes ___ No ___

IDWR-

Page 24 of 30 of Group II

*(Changed 10/13/83, added question to 1 above; this checklist is for use with "Part A" permit applicants that have not submitted "Part B" application)

**This response column indicates noncompliance.

5. Are the following STEPS TO CLOSE included in the plan:

- | | | | |
|---|-----|-----|----|
| a. removal of wastes [335.214(a)]? | N/A | Yes | No |
| b. treatment of wastes [335.214(a)]? | N/A | Yes | No |
| c. waste disposal [335.214(a)]? | N/A | Yes | No |
| d. cover [335.344(a)]? | N/A | Yes | No |
| e. decontamination of equipment and structures [335.213(a)(3)]? | N/A | Yes | No |
| f. closure certification [335.216]? | N/A | Yes | No |

6. Does the plan describe the DECONTAMINATION [335.213(a)(3)] of facility equipment and structures?

N/A Yes No

7. With respect to CERTIFICATION of closure (335.216), does the closure plan describe scheduled or estimated number of inspections?

Yes No

8. Does the plan identify the YEAR when closure is expected to occur [335.213(a)(4)]?

Year Yes No

9. Is there a SCHEDULE for final closure activities [335.213(a)(4)]?

Yes No

10. Closure plan evaluated 5-5-86 : Adequate
(date)

Yes No

COMMENTS

No closure plan for the retention/equalization basin and the sludge drying beds. If the units are determined to be RCRA regulated land disposal facilities

11. POST-CLOSURE PLAN CHECKLIST: Is there a written plan?

N/A ___ Yes ___ No ☒

Note: If no post-closure required, proceed to Cost Estimate Checklist.

1. Does the post-closure plan provide for 30 years of post-closure care?

N/A ___ Yes ___ No ___

How many years of post-closure care? _____

2. Does the plan clearly identify the ACTIVITIES required in the post-closure care?

Yes ___ No ___

3. Do the MAINTENANCE PLANS for waste containment structures [335.218(a)(2)] include:

a. maintaining final cover (erosion damage repair) frequencies [335.344(d)(1)]?

Yes ___ No ___

b. vegetation and fertilizing frequencies [335.218(a)(2)(A)]?

Yes ___ No ___

c. collecting, removing, and treating leachate activities [335.344(j)(2)]?

N/A ___ Yes ___ No ___

d. collecting, removing, and treating leachate frequencies [335.344(d)(2)]?

N/A ___ Yes ___ No ___

e. gas collection activities [335.344(d)(3)]?

N/A ___ Yes ___ No ___

f. gas collection frequencies [335.344(d)(3)]?

N/A ___ Yes ___ No ___

4. Do MONITORING EQUIPMENT MAINTENANCE plans [335.218(a)(2)(B)] include:

a. activities?

Yes ___ No ___

b. frequencies?

Yes ___ No ___

5. Does the plan identify the name, address and phone number of the POST-CLOSURE PERIOD CONTACT [335.218(a)(3)]?

Yes ___ No ___

6. For landfills, does the post-closure plan address the following objectives and indicate how they will be achieved [335.344(b)]?
 - a. Control of pollution migration via ground water, surface water, and air. N/A ___ Yes ___ No ___
 - b. Control of surface water infiltration, including prevention of pooling. N/A ___ Yes ___ No ___
 - c. Prevention of erosion. N/A ___ Yes ___ No ___
7. For land treatment operations, does the post-closure plan address the following objectives and indicate how they will be achieved [335.327(a)]?
 - a. Control of migration of hazardous wastes and constituents into the ground water. N/A ___ Yes ___ No ___
 - b. Control of the release of contaminated runoff into surface water. N/A ___ Yes ___ No ___
 - c. Control of the release of airborne particulate contaminants caused by wind erosion. N/A ___ Yes ___ No ___
 - d. Protection of food chain crops. N/A ___ Yes ___ No ___
8. For landfills and land treatment operations, does the post-closure plan include at least a narrative statement indicating that the following factors were considered in addressing the closure objectives [335.327(b), 335.344(b)]?
 - a. Type and amount of waste. N/A ___ Yes ___ No ___
 - b. Mobility and rate of migration. N/A ___ Yes ___ No ___
 - c. Site location, topography, and surrounding land use. N/A ___ Yes ___ No ___
 - d. Climate, including precipitation. N/A ___ Yes ___ No ___
 - e. Characteristics of the cover, including material, final surface contour, thickness, porosity, permeability, slope, vegetation. N/A ___ Yes ___ No ___

- f. Geological and soil profiles and surface and subsurface hydrology. N/A ___ Yes ___ No ___
- g. Unsaturated zone monitoring. N/A ___ Yes ___ No ___
- h. Type, concentration, and depth of hazardous constituent migration as compared to background concentrations. N/A ___ Yes ___ No ___
9. Does the plan address the requirement for notice to the local land authority (335.219)? Yes ___ No ___
10. Does the plan address the requirement for notice in the deed (335.220)? Yes ___ No ___
11. Post closure plan evaluated 5-5-86 Adequate Yes ___ No ✓
Date

COMMENTS

No post closure plan for the retention/equalization basin and the sludge drying bed if the units are determined to be RCRA regulated land disposal facilities.

111. COST ESTIMATE; Evaluated: 5-5-86
date

N/A ___ Yes ☒ No ___

1. Is there a written closure cost estimate [335.232(a)]
(Supp. 14 of Group 1 for estimated cost? Yes ☒ No ___

2. Is the closure cost estimate adequate to cover all
required closure activities [335.232(a)]? Yes ___ No ☒

If "No", specify in comments.

3. Is there a written post-closure cost
estimate [335.233(a)]? N/A ___ Yes ___ No ☒

4. Is the annual estimate multiplied by 30 to
cover the entire post-closure care period
[335.233(b)]? N/A ☒ Yes ___ No ___
or number of years ___

5. Is the cost estimate adequate to cover all the activities
in the post-closure plan [335.218(a)]? Yes ___ No ___

Including labor costs? Yes ___ No ___

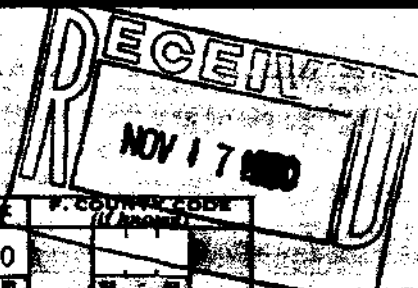
As well as the requirements of notice
to local land authorities and in deeds
[335.219 and .220]? Yes ___ No ___

COMMENTS

The closure cost estimate does not include
the closure of the retention/equalization
basin and the sludge drying beds.
The company has not developed a written
post closure cost estimate. This only applies
if the units are determined to RCRA regu-
lated land disposal facilities

ATTACHMENT NO. 5
EPA PART A PERMIT APPLICATION

 U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>		I. EPA I.D. NUMBER <div style="border: 1px solid black; padding: 2px;"> TXD 0663688793 </div>	
II. FACILITY NAME SMITH W J WOOD PRESERVING CO* III. MAILING ADDRESS PO BOX 703 DENISON TX 75020 IV. FACILITY LOCATION 1700 W MORTON DENISON TX 75020		GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is incomplete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	
V. POLLUTANT CHARACTERISTICS INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.			
SPECIFIC QUESTIONS		SPECIFIC QUESTIONS	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)	
YES NO FORM ATTACHED X		YES NO FORM ATTACHED X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)	
YES NO FORM ATTACHED X		YES NO FORM ATTACHED X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	
YES NO FORM ATTACHED X X		YES NO FORM ATTACHED X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	
YES NO FORM ATTACHED X		YES NO FORM ATTACHED X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	
YES NO FORM ATTACHED X		YES NO FORM ATTACHED X	
III. NAME OF FACILITY W. J. Smith Wood Preserving Company			
IV. FACILITY CONTACT A. NAME & TITLE (last, first, & title) Fehr Clarence Vice President B. PHONE (area code & no.) 214 465 6161			
V. FACILITY MAILING ADDRESS A. STREET OR P.O. BOX P 700 BOX 703 B. CITY OR TOWN Denison C. STATE TX D. ZIP CODE 75020			
VI. FACILITY LOCATION A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER 700 Morton Street B. COUNTY NAME Grayson C. CITY OR TOWN Denison D. STATE TX E. ZIP CODE 75020			



VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	2	4	9	1	(specify)	7	(specify)
Wood Preserving				N/A			
C. THIRD				D. FOURTH			
(specify)				(specify)			
N/A				N/A			

VIII. OPERATOR INFORMATION

A. NAME												B. Is the name listed in form VIII-A also the owner?			
W J Smith Wood Preserving Company												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)															
F = FEDERAL S = STATE P = PRIVATE				M = PUBLIC (other than federal or state) O = OTHER (specify)				P (specify)		D. PHONE (area code & no.)					
										214 465 6161					
E. STREET OR P.O. BOX															
1700 Morton Street															
F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
Denison										TX		75020		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
9 N										9 P									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
9 U										296 (specify) Texas Air Control Board									
C. RCRA (Hazardous Wastes)										F. OTHER (specify)									
										Issued 6/28/78 (specify) City of Denison									

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

F9: A/50

XII. NATURE OF BUSINESS (provide a brief description)

W. J. Smith is in the wood preserving business. Basically wood is purchased in semi-finished form, and is air dried. The wood is trimmed into finished form such as crossties or bridge timbers. A preservative is injected into the wood in closed pressure cylinders.

F9: A/51

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)		B. SIGNATURE		C. DATE SIGNED	
Clarence C. Fehr, Vice President		Clarence C. Fehr		November 14, 1980	
D. COMMENTS FOR OFFICIAL USE ONLY					



U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE PERMIT APPLICATION
Consolidated Permits Program
(This information is required under Section 3005 of RCRA.)

1. EPA I.D. NUMBER

FTXD06636887931

OFFICIAL USE ONLY

APPLICATION PROVED	DATE RECEIVED (yr., mo., & day)
A	801117

COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☒ 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

☐ 2. NEW FACILITY (Complete item below.)

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION (place an "X" below and complete Item I above)

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
ASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
URFACE IMPOUNDMENT	S04	GALLONS OR LITERS

Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or inciner- ators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

A. PRO- CESS CODE (from list above)		B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER	A. PRO- CESS CODE (from list above)		B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER
1. AMOUNT (specify)	2. UNIT OF MEAS- URE (enter code)	1. AMOUNT	2. UNIT OF MEAS- URE (enter code)			1. AMOUNT	2. UNIT OF MEAS- URE (enter code)				
X-1 S 0 2	600	G			5						
X-2 T 0 3	20	E			6						
S 0 4	130,000 .000	G			7						
T 0 2	50,000 .000	U			8						
3 T 0 4	50,000 .000	U			9						
4					10						

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED INCLUDE DESIGN CAPACITY.

T04 - Biological trickling filter has an area equivalent to a 16.3 foot circular tower with a height of 16.3 feet. The influent rate is 0.0403 million gallons per day (mgd) and recirculation rate is 0.5 mgd. The effluent enters the Denison sanitary sewer.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE **CODE**
 POUNDS P
 TONS T

METRIC UNIT OF MEASURE **CODE**
 KILOGRAMS K
 METRIC TONS M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous wastes.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

with a height
ulation rate is 0.1

page 2.
this page before completing if you have more than 26 wastes to list.

DESCRIPTION OF HAZARDOUS WASTES (continued)																				
A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE				C. UNIT OF MEASURE (enter code)		D. PROCESSES										
										1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))						
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27						
1	K	0	0	1			1,000,000	P			S	O	4	T	0	2	T	0	4	
2																				
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IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

1	2	3	4	5	6	7	8	9	10	11	12
F	T	X	D	0	6	6	3	6	8	8	7
											9
											5
											6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

3	3	4	5	2	2	0
45	46	47	48	49	50	51

LONGITUDE (degrees, minutes, & seconds)

8	9	6	3	3	4	4	0
72	73	74	75	76	77	78	79

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

1	2	3	4	5	6	7	8	9	10	11	12
E											

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

1	2	3	4	5	6	7	8	9	10	11	12
F											

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

Mr. Clarence C. Fehr

Clarence C. Fehr

November 14, 1980

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

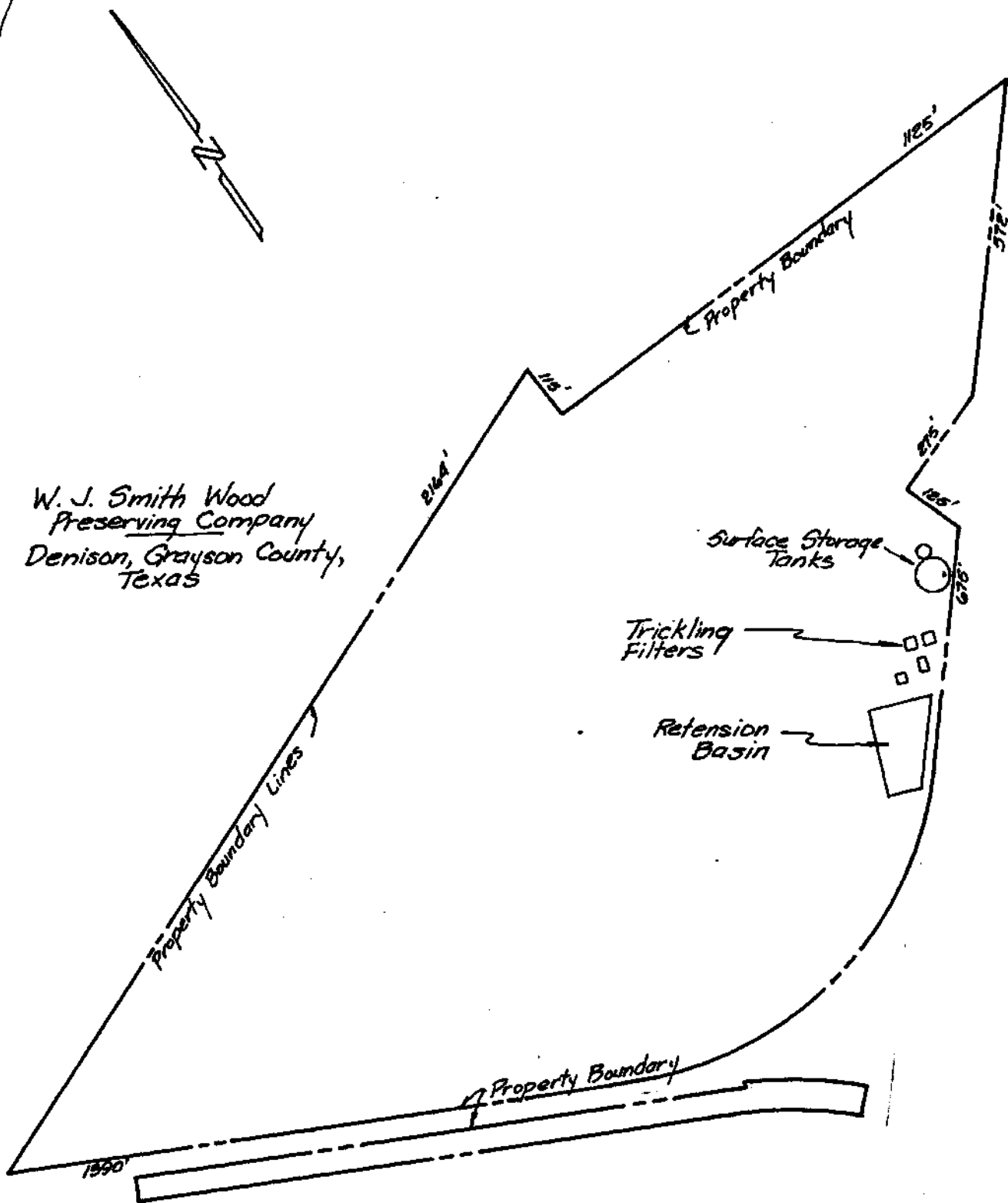
A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

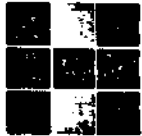
PROPERTY DRAWING (see page 4)

W. J. Smith Wood
Preserving Company
Denison, Grayson County,
Texas



SCALE: 1" = 300'

ATTACHMENT NO. 6
"BEST FAITH EFFORT"



ALBERT H. HALFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

ALBERT H. HALFF, CHAIRMAN OF BOARD
JOSE I. NOVOA, PRESIDENT
RAUL WONG, JR., SENIOR VICE PRESIDENT
DON O. BROCK, VICE PRESIDENT
MICHAEL K. KOESLING, VICE PRESIDENT
TROY LYNN LOVELL, VICE PRESIDENT
WALTER E. SKIPWITH, SECRETARY
GEORGE PRALL, JR.
JEFFREY H. JACOB
DAVID S. MORGAN

DALLAS • FT. WORTH

8816 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225
214/739-0084

November 7, 1985
AVO 7964

Texas Water Commission
P.O. Box 13087
Capitol Station
Austin, Texas 78711

Re: Efforts of W. J. Smith Wood Preserving Co., Denison, Texas
to Obtain Environmental Impairment Liability Insurance

Gentlemen:

We have acted as environmental consultants for W. J. Smith Wood Preserving Co. and have closely followed their efforts to obtain sudden and non-sudden environmental impairment liability insurance.

Despite all efforts to obtain sudden and non-sudden environmental impairment liability ("EIL") insurance prior to November 7, 1985, W. J. Smith Wood Preserving Co. ("the Company") has been unable to obtain such coverage. Pursuant to the April 12, 1985 memorandum from the U. S. Environmental Protection Agency ("EPA") entitled "Enforcement Guidance for a Constrained Insurance Market", this letter is submitted to document the good faith efforts made by the Company to obtain the insurance coverage required by the applicable regulations of the Texas Water Commission ("TWC").

The Company is a wholly-owned subsidiary of Katy Industries, Inc. ("Katy"). In September 1984, the Risk Management Department of Katy and appropriate Company representatives began attempting to obtain EIL insurance coverage. A copy of a letter dated September 7, 1984, from Corroon & Black of Illinois, Inc. to Katy is attached hereto as Exhibit A. That letter and the application form were forwarded to the Company by Katy on September 11, 1984 (Exhibit B). The application was forwarded to the Company's environmental consultants, Albert H. Halff Associates, Inc. ("Halff"), Dallas, Texas, on September 17, 1984 (Exhibit C). It was completed and returned to Katy on October 9, 1984 (Exhibit D). A copy of the completed application, dated October 9, 1984, to Shand, Morahan & Company, Inc. ("Shand, Morahan") is attached as Exhibit E. Apparent favorable consideration was initially given by Shand, Morahan. On November 7, 1984, Katy forwarded a letter from Corroon & Black (Exhibit F) which indicated that an inspection report by a qualified engineering firm was needed, but that Shand, Morahan would write the insurance. The risk manager for Katy, Mr. Verne Andrews, had previously written Mr. B. L. Redding, President of the Company, on October 26, 1984, urging the scheduling of an environmental assessment by one of the acceptable consultants (Exhibit G). Despite the



ALBERT H. HALFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

Texas Water Commission
November 7, 1985
Page 2

favorable correspondence, however, Shand, Morshan continued to vacillate about writing the coverage. The reason became apparent in January 1985, when that company announced that it would not renew any EIL insurance policies whatsoever.

The market at that point (January 1985) had, for all intents and purposes, disappeared except for American International Group ("AIG") and its affiliated companies, including American International Companies ("AIC") and National Union Fire Insurance Company of Pittsburgh, PA ("National Union"). The Company immediately began negotiations, through several qualified brokers, for coverage through one of the AIG companies. An initial quote and pre-issuance requirements were furnished by letter dated December 10, 1984 (Exhibit H).

It was apparent that an environmental risk assessment ("ERA") was essential. Therefore, the Company negotiated a contract with Pilko & Associates, Inc. ("Pilko"), Houston, Texas, to provide such a study. The on-site inspection was conducted on February 12, 1985. Pilko's report was not completed until May 1985. The Pilko report was immediately submitted to Texas Employers Insurance Association, a broker seeking to place the policy with National Union. Subsequently, on May 28, 1985, the completed National Union application was submitted for further consideration (Exhibit I). That application, along with the Pilko report, was submitted to AIC on June 3, 1985 (Exhibit J). The insurance broker advised the Company on June 6, 1985, that AIC was "the only game in town" and that the application was pending (Exhibit K).

No word was received from AIC until August 16, 1985, when the Company received a copy of AIC's August 6, 1985 letter (Exhibit L). That letter called for responses to five specific recommendations found in the Pilko report before further action could be taken on issuance of the policy. Of the five recommendations, two were estimated to require four to six months for completion and implementation. Those recommendations dealt with closure of an unlined oil/water separator pond and construction of a concrete replacement facility and testing of on-site electrical transformers for PCB content.

With regard to the closure of the unlined surface impoundment, numerous problems were encountered in trying to locate a waste disposal facility that could handle or accept partially-liquid wastes. For nearly two months, no such facility was in operation in a three state area (Texas, Louisiana, Oklahoma). Accordingly, this firm negotiated a plan with the TWC to allow



ALBERT H. HALFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

Texas Water Commission
November 7, 1985
Page 3

actual removal and drying of the contaminated soils on or about October 30, 1985. Work is presently proceeding on that phase of the project as quickly as possible.

As for the testing of the electrical transformers for PCB content, despite diligent efforts, neither this firm nor the Company has, to date, located an electrical contractor willing or competent to conduct such tests. Efforts are continuing and we expect to complete that testing in the reasonably near future. The remaining recommendations in the Pilko report which require action by the Company will all be completed prior to the completion of the closure and replacement of the oil/water separator pond.

Ground water monitoring wells have already been installed at the plant site. The Company has provided a surety bond for \$60,000 for closure/post-closure expenses. The original bond and trust agreement were submitted effective June 12, 1984, and the bond has been renewed through June 12, 1986 (Exhibit M). The appropriate permit applications are being submitted to TWC for continued interim operations pending closure of the surface impoundments. In short, the Company has done everything reasonably possible to obtain EIL insurance coverage in a timely manner. The ERA called for certain modifications to the plant before the only available insurer will provide the coverage. At great expense, the Company is endeavoring, as quickly as possible, to make the required changes. As soon as they are completed, the Company expects to have the insurance issued. Despite the fact that the policy will not be in place on November 8, 1985, the Company should not be penalized, as it has truly made a good faith effort to obtain the insurance coverage.

Please advise if any additional information or documentation is necessary or desired.

Yours very truly,

ALBERT H. HALFF ASSOCIATES, INC.

Patrick E. Jolly, P.E.

PEJ/mm

ATTACHMENT NO. 7

CORRESPONDENCE WITH INSURANCE COMPANIES



EXHIBIT A

CORROON & BLACK of Illinois, Inc.
135 South LaSalle Street • Chicago 60603
312-621-4940

Insurance Brokers • Consultants
TWX • 9102214199 • NOORROC CGO
Cable • ALEXANCO

J. THOMAS FREIDHEIM
Vice President

September 7, 1984

Mr. Verne A. Andrews, Risk Manager
Katy Industries, Inc.
853 Dundee Avenue
Elgin, Illinois 60120

Re: W. J. Smith Wood Preserving, Inc.

Dear Verne:

Attached is an application known as Form No. SM1410 which must be filled out for each location of the above division. Also, if they have filed any EPA forms in reference to this clean-up or their use in protection of that property they should be sent back with the completed applications.

This application is for Shand, Morahan & Company, Inc. I would suggest that this is the only game left. The market for this type of coverage has completely fallen apart over the last nine months and the insurance is close to non-available. Shand has been the best in the marketplace for some time and it would appear that they are going to stick around for some time.

As soon as they have finished this let me know and I will come out and pickup the applications from you and hand carry them to Shand so that we can try and shorten up the time frame on this. Let me know if you have any questions:

Sincerely,

J. Thomas Freidheim

JTF/paf

Attached

SEP 10 1984

TO: *Reba Sneed*
W. J. Smith Wood Rev. Co
Elmwood, Texas

KATY INDUSTRIES, INC.
853 DUNDEE AVENUE
ELGIN, ILLINOIS 60120
(312) 697-8900 SUBURBAN
(312) 379-1121 CHICAGO

SUBJECT <i>E. I. L. Coverage</i>	ATTENTION	DATE <i>9-11-84</i>
----------------------------------	-----------	---------------------

Dear Reba:

The Texas Water Department has now indicated that coverage for non-sudden pollution is needed. Your present insurance should cover sudden and accidental pollution but would not extend to non-sudden. There,

PLEASE REPLY TO → SIGNED *a special type of policy is needed.*

As you can see by C+B's letter this is not easy to get and could be expensive. But since it is required by Texas (and within 60 days) we must comply.

We must have the application completed IN FULL just as soon as possible so we can get the wheels rolling. Your early reply is urgently needed.

DATE _____ SIGNED *Nerne Andrews*

RECIPIENT - REPLY AND RETAIN PINK COPY. DETACH AND RETURN THIS COPY TO SENDER.

EXHIBIT *B*

EXHIBIT C

September 17, 1984

Mr. Pat Jolly
Albert H. Halff Associates, Inc.
8616 Northwest Plaza Drive
Dallas, Texas 86225

Dear Pat:

We have on file with the Texas Department of WaterResources a surety bond which apparently does not meet their requirements.

Our Home Office has sent us an application to be filled in and returned so that they may issue non-sudden pollution coverage. We do not know the answers to many of these questions.

We would appreciate it if you would fill in all the technical questions and return to us as soon as possible. We will complete and sign and forward to the Home Office.

All of our transactions regarding this bond have been with Mr. Russell Kumble, (512) 475-5516 should you need any information or assistance.

Yours very truly,

B. L. Redding
President

BLR:rs
Enclosures

cc Vern Andrews

EXHIBIT D

October 9, 1984

Mr. Verna Andrews
Risk Manager
Katy Industries, Inc.
853 Dundee Avenue
Elgin, Illinois 60120

Re: E.I.L. Coverage

Dear Verna:

We are returning the application for Environmental Impairment Liability Insurance, together with a copy of a geological survey map furnished us by our engineers handling our waste water control plan. There is also attached a copy of our emergency plan as requested in Item 7(b).

We are sorry to have been so long in getting this application filled in but we had to secure the services of our engineers in order to complete certain parts of the application.

Thanks for your help.

Yours very truly,

Reba Sneed

RS:s
Enclosures

*Copy made of all three sheets
except one letter - as letter
to us (V. Andrews) - for
Jim Linas & Co.
Engineers.*

FRONT Page Only



SUBMITTED BY: _____
PRODUCER: _____
ADDRESS: _____

ZIP _____
SURPLUS LINES LICENSE NO.: _____

UNDERWRITING MANAGER

SHAND, MORAHAN & COMPANY, INC.
ONE AMERICAN PLAZA
EVANSTON, ILLINOIS 60201
Telex: 72 4328 Phone: (312) 866-2800

APPLICATION FOR ENVIRONMENTAL IMPAIRMENT LIABILITY INSURANCE (CLAIMS MADE BASIS)

APPLICANT'S INSTRUCTIONS:

1. Answer all questions. If the answer to any question is NONE, please state NONE.
2. Application must be signed and dated by owner, partner or officer.
3. Complete a separate application for each site, facility or operation.
4. PLEASE READ CAREFULLY THE STATEMENTS AT THE END OF THIS APPLICATION.

EXHIBIT E

(PLEASE TYPE OR PRINT)

1. APPLICANT

- a. Full name of all entities to be Named Insureds: W. J. Smith Wood Preserving Company
- b. Principal address: 1700 W. Morton Street
Denison, Texas 75020
- c. Location of site or facility: 1.4 miles west of intersection US 75 and Morton Street
(FM 120) - Denison, Texas
- d. Business conducted: Wood Preserving
- e. Corporation ☒ Partnership ☐ Proprietorship ☐ Other ☐
- f. Years in business at this location: 75
- g. Prior experience in this business: --
- h. Present affiliation with other firms: Subsidiary of Katy Industries, Inc.

WASTE STORAGE AND TREATMENT FACILITIES complete sections 2 through 8.

✓ WASTE GENERATORS complete sections 3, 4, 6, 7, 9.

WASTE TRANSPORTERS complete sections 6, 7, 10 (& 3 if applicable).

2. A SITE OR FACILITY

- a. Describe the ultimate waste disposal methods utilized. ☐ Landfill ☐ Incineration ☐ Other Treatment

Describe: _____



EXHIBIT F (page 2)

CORROON & BLACK of Illinois, Inc.
135 South LaSalle Street • Chicago 60603
312-621-4700

Insurance Brokers • Consultants
TWX • 9102214199 • NOORROC CGO
Cable • ALEXANCO

November 1, 1984

Mr. Verne Andrews
Katy Industries, Inc.
853 Dundee Avenue
Elgin, IL 60120

RE: W. J. Smith Wood Preserving/
Environmental Impairment Liability

Dear Verne:

As I noted to you on the phone we have a quotation for the Environmental Impairment Liability for the above division that is subject to inspection. The quote is as follows:


Limit	Deductible	Premium
3,000,000/6,000,000	50,000	\$29,250 Flat
3,000,000/6,000,000	100,000	\$21,250 Flat

The inspection must be done by a qualified engineer and the carrier Shand Morahan has offered two (2) such acceptable engineering companies in the same area as your division. Their names are Pilco; and Harding and Lawson. They suggested that the minimum charge for this will be approximately \$3,500.

If W. J. Smith will get in touch with these people it was told to me that we could have a very quick inspection and a verbal report by the engineer to Shand Morahan. At that time possibly we could go into further negotiations on the premium.

Let me know if you have any questions.

Sincerely,


J. Thomas Freidheim
Senior Vice President

JTF/ses

NOV 6 1984

Offices and Affiliates in Over 100 Cities World-Wide

Mr. W. Redding

EXHIBIT

G. 2

Mr. J. Smith Wood Pres. Co

Alvin, Texas

Re Environmental Impairment Liability

Dear Bill:

This will confirm our telephone conversation of Friday Oct 26 regarding E.I.L. coverage for your company.

We have received a firm quote from Shand, Morahan, subject to an area survey,

the quote is as follows:

For Limits of 3,000,000/6,000,000 as required by the Texas Water Dept.

\$ 29,250.00 with a \$50,000 deductible per occurrence

\$ 21,750.00 with a \$100,000 deductible per occurrence

These are annual flat charge rates and premiums.

Although, the quote is firm it is subject to a satisfactory survey. This survey must be supplied by the customer and the cost probably will be \$3,500.00.

The insurance company advises they will accept the finding of either PILCO or HARDING & LAWSON both in your area.

When the survey is completed the surveyor should call KEN JAGMIN at Shand Morahan 312-866-280 immediately so coverage can be bound.

I will assume that you will arrange
for the survey to be completed as soon as
possible so the policy can be issued as re-
quested by the Texas authorities.

Keep me posted.

Vernon Andrews

4/10/72

**American International Companies**

LOS ANGELES BRANCH OFFICE
3699 Wilshire Boulevard
Los Angeles, California 90010
213/480-3400

December 10, 1984

Donald R. Lee
National General Agency
P.O. Box 2759
Dallas, TX 75221

RE: W.J. Smith Wood Preserving Company

POLLUTION LEGAL LIABILITY PREMIUM INDICATION

Dear Donald,

The following constitutes our premium indication on the above captioned account for the wood preserving facility detailed in the submission. Gradual coverage will be provided using National Union form #29700. (Enclosed)

Limit of Liability: \$ 3,000,000/\$ 6,000,000

Self Insured Retention: A) \$ 50,000
B) \$ 100,000

Premium: A) \$ 35,060
B) \$ 30,850

The above indication is subject to the following:

- 1) A satisfactory engineering survey by the firm of our choice. (fee not included)
- 2) A completed National Union pollution application signed by the insured.
- 3) Name & EPA #'s of any non-owned disposal sites used by the insured.
- 4) Construction details on the lagoons, such as size, type and thickness of liner, monitoring well results, etc.
- 5) Schedule of tank information such as age, whether above or below ground, diked etc.
- 6) Details on water treatment facility such as method of treatment, POTW permits, sludge analysis, water monitoring results, etc.
- 7) Details on non-compliance concerning the lagoon and action taken to meet compliance standards.

There will be no coverage for the following:

- 1) Any underground tank 12 years or older unless satisfactory NFPA integrity tests are performed by the insured.
- 2) Liability arising out of Superfund sites.

These indications will valid until December 31, 1984.

Very truly yours,

A handwritten signature in cursive script that reads "Nola M. Cameron".

Nola M. Cameron
Pollution Legal Liability

NMC/pp

cc: John Amore
Paul J. Kinni

May 28, 1985

Mr. Jim Leinart
Texas Employers Insurance Association
4107 Highway 75 North
Sherman, Texas 75090

Dear Jim:

Referring to information needed to have a Pollution Legal Liability Policy issued to us, we are submitting the following information:

1. An engineering survey by Pilko Company has already been furnished you: this was one of the engineering firms acceptable by you.
2. National Union pollution application, completed and signed, is attached.
3. We do not have the name and EPA's of the non-owned disposal sites but any material to be disposed will be contracted to hauling contractors, possibly Chemical Waste Management, Inc. or Texas Ecologists.
4. The lagoons are on the M.K.T. property and according to Pilko's report, will not be included under this liability policy.
5. A schedule of tank information is attached, however, please refer to page 3 of Pilko's report.
6. Water Treatment Facility: bacterial treatment plant using trickling filters, prior to wastewater discharge to City of Denison, under 1976 POTW permit; Both sludge content analysed daily in lab and wastewater analysed daily before discharge to POTW to be sure analysis meets POTW requirements.
7. Non-applicable since lagoons will not be covered.

Please advise us if additional information is needed.

Yours very truly,

B. L. Redding
President

BLR:rs
Enclosures



NATIONAL UNION
FIRE INSURANCE COMPANY
OF PITTSBURGH, PA.

ADMINISTRATIVE OFFICES
70 PINE STREET, NEW YORK, N.Y. 10270

Front Page Only

EXHIBIT I (con't.)

POLLUTION LEGAL LIABILITY APPLICATION
(Include 10K report, annual report, and flow chart of process if available.)

THIS IS AN APPLICATION FOR A CLAIMS MADE POLICY

1. NAMED INSURED: (Include All Subsidiary Companies to be Covered) _____

W. J. SMITH WOOD PRESERVING COMPANY

EPA IDENTIFICATION NUMBER(S): _____

TxD066368879

POST OFFICE ADDRESS: _____

1700 W. Morton Street, P. O. Box 703

Denison, Texas 75020

LOCATIONS TO BE COVERED: Plant 1.4 miles west of Intersection U.S. Highway 75
and Morton Street (FM 120), Denison, Texas

2. NAMED INSURED IS:

☐ Partnership ☒ Corporation ☐ Joint Venture ☐ Other _____

3. BUSINESS OF NAMED INSURED IS:

☒ Waste Generator ☐ Waste Transporter ☐ Waste Treatment, Storage and Disposal Facility ☐ Other _____

4. HOW LONG HAS THE NAMED INSURED BEEN IN BUSINESS? 56 years.

5. SALES:

A) ESTIMATED (Ensuing Year): 1985 - 11 million

B) LAST 5 YEARS: 19 84 12 mil. 19 83 11 mil. 19 82 10 mil. 19 81 16 mil. 19 80 14 mil.

6. PLEASE LIST: A. RAW MATERIALS USED AT LOCATION:

B. PROCESS MATERIALS USED AT LOCATION:

(Plating agents, degreasers, heat treating agents, cleaning solvents, etc.)

(Please use additional sheet if space provided is insufficient.)

DESCRIPTION	QUANTITY USED PER YEAR	MAXIMUM QUANTITY STOCKED ANY ONE TIME
Forest Products	2,214,465 cu.ft.	2,500,000 cu.ft. approx.
Preservatives (creosote)	1,440,000 gals.	350,000 gals. approx.



EXHIBIT J

NATIONAL GENERAL AGENCY, INC.

1301 YOUNG | DALLAS, TEXAS 75202

June 3, 1985

American International Companies
3699 Wilshire Boulevard
Los Angeles, California 90010

Attn: Ms. Nola Cameron
Pollution Legal Liability Dept.

Re: W.J. Smith Wood Preserving Company
Pollution Legal Liability Quotations

2201 JUN 08 1985

Dear Nola:

On 12-10-84 you gave us premium indications on the above account. Please see the attached copy of your prior letter. At that time, you needed answers to some additional questions, and you also needed an Engineering Survey done by an approved outside engineering firm.

Attached is a completed application, a letter dated 5-28-85 from W.J. Smith Wood Preserving Company and an Engineering Survey conducted by Pilko & Associates dated 5-16-85.

Please review the attached information and furnish us with quotations on this account at the earliest. We would like quotations at various limits and deductibles.

Thanks very much and let me know if you need anything else.

Sincerely yours,

Donald R. Lee
Vice President & Manager

DRL:pt

cc: Mr. Jim Leinart



EXHIBIT K

TEXAS EMPLOYERS' INSURANCE ASSOCIATION

4107 HIGHWAY 75 NORTH | SHERMAN, TEXAS 75090 | TEL. 893-9471 AREA CODE 214

June 6, 1985

Mr. B. L. Redding, President
W. J. Smith Wood Preserving Company
Post Office Box 703
Denison, Texas 75020

Re: Pollution Liability Application

Dear Mr. Redding:

Thank you very much for your letter of May 28, 1985 with the additional information concerning the pollution liability coverage.

Please find attached a copy of a letter from our Home Office to American International Companies concerning this coverage.

I have been advised that American International is about the only company that is quoting pollution liability at the present time and that they are behind in issuing quotations. Hopefully we can hear from them in the near future, but it will be several weeks, I'm sure.

Thank you very much for your cooperation in this matter.

Sincerely,

Jim Leinart
Senior Marketing Executive

J:mek



EMPLOYERS INSURANCE OF TEXAS

ers Casualty Company
employers' Insurance Association
yers National Life Insurance Company
4107 Hwy. 75 North / Sherman, Tex. 75090 / 214 893-9471
Res. 892-8600

EXHIBIT L



American International Companies

LOS ANGELES BRANCH OFFICE
3699 Wilshire Boulevard
Los Angeles, California 90010
213/480-3400

August 6, 1985

Donald R. Lee
National General Agency Inc.
P.O. Box 2759
Dallas, TX 75221

RE: W.J. Smith Wood Preserving Co.

32 ET AUG 16 1985

Dear Donald,

I have reviewed the Additional information and the Pilko report. Prior to providing indications on this account I will need a response to the recommendations made on page 4 of the report and status of actions taken to comply with those recommendations.

Please review and advise.

Sincerely,

Nola M. Cameron
Pollution Legal Liability

NMC/pp

cc: John Amore

RISK ASSESSMENT RATING

82 EN AUG 16 1985

The W. J. Smith Wood Preservative Company, Denison Plant, is considered an average exposure based on 1) low permeability of the underlying soils, 2) the reported depth of 80-150 feet to usable groundwater, 3) the use of a concrete lined basin for contaminated water, and 4) treatment of wastewaters and stormwater in a POTW.

There is some concern with the use of an uncoated buried steel preservative tank, buried diesel fuel storage tanks and the unlined oil/water separator.

RECOMMENDATIONS

The following recommendations, with suggested time intervals for completion, are made as a condition of the risk assessment rating assigned.

- 85-1 Consider alternatives to storage of materials in buried tanks or select procedures for leak detection and monitoring of buried storage tanks and piping. Implement the leak detection monitoring procedures and document results for review by the consulting engineer. (6 Months)
- 85-2 Conduct soil boring on the tram track area outside the treating building and tank car unloading areas to determine the penetration depth of the preservatives. (3 months)
- 85-3 Complete the closure of the unlined oil/water separator pond and construction of the concrete oil/water separator as required by the compliance agreement with the TDWR. (6 months)
- 85-4 Test transformer oils in onsite transformers for PCB content. If PCBs are found, implement procedures required by TSCA regulations found in 40 CFR Section 761. (4 months)
- 85-5 Revise SPCC plan incorporating changes from the closure of the unlined oil/water separator. Recertify the plan as required by regulations. (7 months)



C. J. Smith & Co.
Of Illinois, Inc.
INSURANCE BROKERS & CONSULTANTS

135 South LaSalle Street
Chicago, Illinois 60603
(312) 621-4700

INVOICE DATE
06/24/85

INVOICE NO.
228040

CUSTOMER NO.

113099 W J SMITH WOOD PRESERVING
1700 W MORTON ST
DENISON TX 75020

EXHIBIT M

POLICY OR PAYMENT PERIOD 06/12/85 TO 06/12/86 KEN HRUBES (312) 621-4689
NAME INSURED: W J SMITH WOOD

POLICY INFORMATION		AMOUNT
INSURANCE CO OF NO AMER	2444124	
SURETY	RENEWAL PREMIUM	1,200.00
W J SMITH WOOD PRESERVING COMPANY TEXAS DEPARTMENT OF WATER RESOURCES BOND AMOUNT \$60,000.00		

APPROVED FOR PAYMENT	
NAME	<u>YF</u>
DATE	<u>7-8-85</u>

copy of check

PAID

THE PREMIUM IS DUE ON THE EFFECTIVE
DATE OF THE ITEM BILLED.

AMOUNT
DUE

1,200.00

TARGET SHEET

SITE NAME: WJ SMITH WOOD PRESERVING CO

CERCLIS I.D.: TXD066368879

TITLE OF DOC.: [REDACTED] DOJ REFERRAL AND ATTACHMENTS

DATE OF DOC.: UNDATED

NO. OF PGS. THIS TARGET SHEET REPLACES: 125

SDMS #: 500012425 **RELATED #:** 916321

SENSITIVE ? ☒ **MISSING PAGES ?** ☐

ALTERN. MEDIA ? ☐ **CROSS REFERENCE ?** ☐

LAB DOCUMENT ? ☐ **LAB NAME:**

ASC./BOX #:

CASE #: **SDG #:**

PAGES 76-200 WERE REDACTED FROM THIS
DOCUMENT DUE TO FOIA EXEPTION B(5) -
COMMENTS : PRIVILEGED.

EXECUTIVE DIRECTOR
TEXAS DEPARTMENT OF WATER RESOURCES
ATTN: Permit Control & Reports Section
P.O. Box 13087, Capitol Station
Austin, Texas 78711

FOR DEPARTMENT USE ONLY	
Application No.	
Permit No.	
Adm. Review By	
Administratively Complete	
Copies Sent:	

INDUSTRIAL HAZARDOUS WASTE PART B PERMIT APPLICATION

I. GENERAL INFORMATION

A. Applicant: W.J. Smith Wood Preserving Company

(Individual, Corporation, or Other Legal Entity Name)

Address: 1700 W. Morton Street (P.O. Box 703)

City: Denison State: Texas Zip Code: 75020

Telephone Number: (214) 465-6161

If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas. N/A

(Charter Number)

- B. 1. List those persons or firms, including a complete mailing address and telephone number, authorized to act for the applicant during the processing of the permit application.

Mr. Bill Redding

President

W.J. Smith Wood Preserving Co.

P.O. Box 703

Denison, Texas 75020

(214) 465-6161

Dr. Albert C. Petrusek

Albert H. Halff Associates, Inc.

8616 Northwest Plaza Drive

Dallas, Texas 75225

(214) 739-0094

2. If the application is submitted by a corporation or by a person residing out of state, the applicant must designate an Agent in Service or Agent of Service and provide a complete mailing address for the agent. The agent must be a Texas resident.

N/A

3. List the individual and his/her mailing address that will be responsible for causing notice to be published in the newspaper.

Mr. Bill Redding

W.J. Smith Wood Preserving Co.

P.O. Box 703

Denison, Texas 75020

C. Facility for Which Application is Submitted:

W.J. Smith Wood Preserving Company

TDWR Registration No.:

31332

EPA I.D. No.:

TXD066368879

County:

Grayson

- D.**

See Attachment 1 Supplementary Information to Question D.1.

- 2.**

[illegible]

- E.**

 Proof or recordation in this application as attachment

_____ Proof of recordation previously filed _____

(Date and Reg. No.)

X Not applicable, no disposal on-site

Attachment 1
Supplementary Information to Question D.1.

D.I. The two facilities covered within this application include a 450,000 gallon concrete-lined retention/equalization basin for the collection of the effluent resulting from the gravity separation of spent water/creosote mixture from the processing area and the collection of waste waters resulting from run-off contacting the processing area and the product storage areas. The second facility is the gravity drying beds for the dewatering of the biological sludge generated from the trickling filters which are designed for the treatment of waste waters collected in the retention/equalization basin prior to discharging to the POTW (See Process Flow Diagram - Figure 1, Appendix "A").

The retention/equalization basin has been in operation since 1971 and is an active part of the pretreatment system discharging effluent to the City of Denison's wastewater collection system. The primary load to the retention/equalization basin originates from the gravity separator. This concrete tank separates the wastewater for treatment and recycles the creosote for production reuse. Should solids accumulate within the retention/equalization basin, a pump can be initiated to recycle back to the headworks of the wastewater treatment system prior to the separator. Additional wastewater is generated during storm conditions when stormwater which falls on the production or finished product storage areas is collected by yard inlets and piped to the retention/equalization basin for treatment and discharge to the City of Denison.

The sludge drying beds have a design capacity of 50 cubic yards and were constructed in 1971. The sludge, generated from the trickling filter, is concentrated within the inclined plate clarifier and periodically pumped to a decant tank prior to air drying the sludge on the drying beds. The exact quantity of biological sludge generated is not known, but is believed to be less than 1,000 pounds per year since operations began in 1971.

- i. During an emergency, the emergency coordinator will take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur, or spread to other hazardous waste at the facility.

These measures include (check applicable items).

- ☐ Stopping processes and operations
- ☐ Collecting and containing released waste
- ☐ Removing or isolating containers
- ☐ Other (describe below)

The facilities at W.J. Smith Wood Preserving Company requiring the Industrial Hazardous Waste Part B Permit Application are all classified as surface impoundments. Therefore, all procedures that will be adopted in responding to any and all emergency situations have been detailed in Question C.1.d. (Attachment 5) and the Contingency Plan (Appendix F).

ATTACHMENT NO. 9

CME INSPECTION REPORT EXCERPTS

~~NOT YET AVAILABLE FROM
TWC~~

TEXAS WATER COMMISSION
Comprehensive GW Monitoring Evaluation (CME) ReportINSPECTION COVER SHEETEPA ID No. TXD066368879

C.O. Use Only

09-86 LLS

Date Entry Date

NAME OF COMPANY W.J. Smith Wood Preserving CompanySITE ADDRESS P.O. Box 703 Denison TX 75020 Tel (214) 465-6161COUNTY Grayson TYPE OF INDUSTRY Cresote wood PreservationCurrent GW Monitoring Status: Detection (Area 1 - W.J. Smith Plant Site)(Specify for each Waste
Management Area "WMA")None (Area 2 - Mkt Site)Inspection Information:Inspector(s) David Smith, David Buchanan - central office Date(s) 7-23-86Gerardo Garcia, Caroline Abbott - District 4Participants Bill Redding - W.J. SmithPatrick Jolly, Barry Adams, Dan Tansky - Albert H. Halff AssociatesType of Inspection (check) EV CME X SA XEvaluation:

	S	U
A. Monitoring System	<u> </u>	<u>X</u>
B. Sampling Procedures	<u> </u>	<u>X</u>
C. Analysis & Results	<u> </u>	<u> </u>
D. Records & Response	<u> </u>	<u>X</u>

Signed: David Redding
InspectorDate: 8-22-86Signed: Paul H. Lewis
ReviewerDate: 8/29/86

S= Satisfactory

U= Unsatisfactory

Overall Evaluation: Compliant NonCompliant X

TEXAS WATER COMMISSION
Comprehensive GW Monitoring Evaluation (CME) Report

TWC Reg. No. 31332

CONTENTS SHEET

FACILITY NAME W.J. Smith Wood Preserving Company

- ☒ 1. Code Sheet (0814)
- ☐ 2. Interoffice Memorandum (IOM)
- ☒ 3. Inspection Cover Sheet
- ☒ 4. Technical Report, with supporting Attachments
 - ☒ A. Monitoring System
 - ☒ B. Sampling Procedures
 - ☐ C. Analysis and Results
 - ☒ D. Records and Response
- ☒ 5. EV Inspection Checklist (if joint inspection with District Office)
- ☐ 6. Notice of Violation (NOV) / Enforcement Letter to Facility
- ☐ 7. Other (describe) _____

* If a required Checklist is omitted, Explain: Laboratory analyses are
not completed, analyses and results will be submitted as an
addendum when available.

On July 23, 1986, a Comprehensive Groundwater Monitoring Evaluation (CME) was conducted at W.J. Smith Wood Preserving Company. During this inspection, the following noncompliances were noted which are in violation of solid waste rules:

W.J. Smith Plant Site (Area 1)

Violations:

1. 31 TAC 335.112/40 CFR 265.91 (Formerly 31 TAC 335.192).
Monitor wells at the W.J. Smith site are not capable of yielding samples from the uppermost aquifer beneath the facility (See attached Section A, Comment 3.d.).
2. 31 TAC 335.112/40 CFR 265.92 (Formerly 31 TAC 335.193)
W.J. Smith does not maintain a sampling and analysis plan which specifies analytical procedures.
3. 31 TAC 335.112/40 CFR 265.92(e) (Formerly 31 TAC 335.193(e))
W.J. Smith did not obtain water-level measurements during the November 29, 1985 sampling event at the site.
4. 31 TAC 335.112/40 CFR 265.94(2) (Formerly 31 TAC 335.195(2)).
W.J. Smith was supposedly not aware of self-reporting requirements prior to an enforcement conference conducted on July 11, 1986. Analyses from the November 29, 1985 sampling event was not self-reported. Analyses from the July 23, 1986 CME was self-reported at TWC request.

MKT Site (Site 2)

Violation:

1. 31 TAC 335.112/40 CFR 265.90 (Formerly 31 TAC 335.191)
A monitor-well system has not been established at the MKT site to determine the extent of contamination resulting from the operation of the seven impoundments which existed at this site.

Technical Report
Comprehensive GW Monitoring Evaluation (CME)

INTRODUCTION

1. COMPANY: W.J. Smith Wood Preserving Company

Process Description: Creosote wood preservative is pressure impregnated into finished wood products (telephone poles, railroad crossties etc.) within pressure vessels.

Plant Site has been in operation since: 1909

2. PHYSIOGRAPHY AND CLIMATE

a. Site Topography- Attachment A-1 (Indicate site location directly on map or reproduction)

b. Average Annual: Rainfall 38.89" Temperature 64.1°F Evaporation 74"

c. Surficial Soils Map- Attachment A-2

d. Surface water bodies or other recharge/discharge features or wells: A-3

Surface water runoff from the W.J. Smith plant site (Site 1) and the MKT site (Site 2) flow through two unnamed creeks to Waterloo Lake.

e. Other pertinent features- use continuation sheet.

The W.J. Smith plant site has seven monitor wells. In addition, one irrigation well is located approximately 900 feet to the southeast.

3. WASTE MANAGEMENT UNITS Requiring Ground Water Monitoring

- Indicate Units on Site Diagram: Attachment(s) A-4, A-5

- Indicate Waste Management Area (WMA) boundaries on Site Diagram

<u>RCRA Regulated Units</u>		Yr in Service	Status*	Construction
Unit	Size			
No. 1 <u>Retention/Equalization Basin</u>	<u>160' x 160' x 12'</u>	<u>15</u>	<u>A, R</u>	<u>concrete impoundment</u>
No. 2 <u>Sludge Drying Beds</u>	<u>26' x 26' x 7'</u>	<u>15</u>	<u>A, R</u>	<u>concrete impoundment</u>
No. C <u>Earthern Separator</u>	<u>225,000 gallons</u>	<u>76</u>	<u>C, R</u>	<u>circular, unlined pit -</u>
				<u>(closed and replaced by</u>
				<u>concrete separator No. 2)</u>

NOTE: Use continuation sheet if necessary.

* A=Active C=Closed I=Inactive R=Regulated Unit NLI=Nonhazardous

Solid Waste Management Units

Unit	Size	Yr In Service	Status*	Construction
No. A Concrete Separator No. 1	3,700 gallons	77	A	circular concrete tank
No. B Concrete Separator No. 2	19' x 17' x 18'	1	A	concrete tank
No. D Trickling Filter Towers (2)	28' x 19' x 30'	13	A	concrete towers
No. E Concrete Clarifier	10,000 gallons	14	A	open-top concrete tank
No. F* Lagoons "Earthen Basins"	3.5 acres	60	I	(7) unlined pits
No. G* Disposal Pits and Mounds	3.8 acres	1	A ¹	lined and capped landfill
No. H Sludge Decant Tank	8' diameter	unknown	A	elevated, closed top steel tank

NOTE: Use continuation sheet if necessary.

* A=Active C=Closed I=Inactive R=Regulated Unit NH=NonHazardous

* The Earthen Basins (No. F) and Disposal Pits and Mounds (No. G), are located on the MKT Site (Site 2) located west of the W.S. Smith plant site. Material excavated from the inactive earthen basins is being placed in unit No. G for proper disposal.

¹ W.S. Smith has currently filled and capped one landfill, and has plans for one more.

01/81

A. Ground Water Monitoring System

1. Regional Geology (Sherman) Sheet, Geol. Atlas of Texas)
 - a. Physiographic province Gulf Coastal Plain
 - b. Formation(s) Grayson Marl, Main Street Limestone, Pawpaw Sand, Weno Clay
Lithology marl, limestone, sand, clay
Regional dip and gradient Southeast; 35 feet/mile (Part B, Appendix B, p. B-1)
 - c. Depth to top/bottom of useable quality ($\leq 10,000$ mg/l TDS) ground water $\approx 30-100$ feet, determined by See c. in comments below
 - d. Regional direction of ground water flow flow in the Pawpaw, determined by is north to south-southeast (Part B, page 48)
 - e. Is site on recharge area of major/minor named aquifer (Y/N)?
See e. in comments below
 - f. Part B permit application - Geology Report: pages Appendix B- pages B-1 \rightarrow B-16.

Comments: c. Residual materials from the Grayson Marl and the Main Street limestone underly the W.S. Smith facility to a depth of approximately 30 feet. These formations are not known to yield water in Grayson County. The Pawpaw sand which underlies these formations to a depth of approximately 100 feet yields small to moderate quantities of water in this area. Beneath the Pawpaw formation, the remaining Cretaceous Washita group and Fredericksburg group members are not known to yield water in Grayson County. The Cretaceous Trinity group formation is located approximately 600 feet beneath the W.S. Smith facility. This formation is approximately 700 feet thick and forms

comments:

an important aquifer in the area.

- e. The Pawpaw formation which forms a minor aquifer in the vicinity of W.J. Smith outcrops just north of Denison. This aquifer may be subject to recharge from surface infiltration through the overlying Main Street limestone in the vicinity of W.J. Smith. Also, contaminated surface runoff from this facility crosses the outcrop area of the Woodbine formation south of the site. The Woodbine formation forms an important aquifer in Grayson County.

2. Site Hydrogeology (W. J. Smith plant site - Site 1)

- a. Attachment A-6 - Site diagram with locations of waste management area(s) [WMA], borings, wells, lines of cross-sections, etc.
- b. Site stratigraphy to depth of investigation- 106 feet:

Unit	Thickness	Description
<u>I</u>	<u>0-6'</u>	<u>topsoil, sandy</u>
<u>II</u>	<u>10-15'</u>	<u>clay, some sand</u>
<u>III</u>	<u>0-4'</u>	<u>limestone (oil present above this layer)</u>
<u>IV</u>	<u>50-65'</u>	<u>sand w/ shale layers</u>
<u>V</u>	<u>> 20'</u>	<u>grey shale w/ shale and sand layers</u>

- c. Attachment A-7,8 -Cross-Section(s)

- d. Saturated zone(n) and Aquitard(n)

Unit	Depth water Encou.	Saturated Thickness	Potentiometric Rise	Confined/ Unconf.	K	Vertical Gradient
<u>III</u>	<u>but levels unknown due to well construction</u>			<u>unconf.</u>	<u>--</u>	<u>--</u>
<u>IV</u>	<u>N.A.</u>	<u>50-65'</u>	<u>~ 30 feet</u>	<u>confined</u>	<u>10^{-4} cm/sec</u>	

- e. Is first water-bearing zone in hydraulic communication with deeper zone (Y/N)? See comment e. below

- f. Is aquitard continuous beneath site (Y/N)?

- g. If yes for e or f, calculate rate of downward vertical migration on

Attachment See comment g. below; Rate Aquiclude Thickness
Migration Time .

- h. Unit(s) monitored during interim status IV.

- i. Unit(s) designated as uppermost aquifer in Pt. B IV

Concur (Y/N) Uppermost aquifer is unit II.

2. Site Hydrogeology, comments: (W.J. Smith Plant Site Comments)

e. The first water-bearing zone beneath the site (Unit II) is separated by an approximately 4 foot thick limestone layer (Unit III) from the underlying Pawpaw formation (Unit IV).

The presence of artesian conditions in the Pawpaw formation indicate the lack of hydraulic communication between this unit and the uppermost water-bearing zone. Although the limestone layer appears to be laterally continuous beneath the site, it should be noted that it varies laterally in both thickness and composition. In addition, this unit thins to only 1 foot in thickness in the northeastern portion of the plant site (See boring log for monitor well MW-1, Attachment A-11).

During drilling of monitor wells at this site, only creosote contamination was noted in monitor wells MW-2, 4, 5, 6, and 7.

This contamination was located just above the limestone layer (Unit III). The presence of this layer, and the upward hydraulic gradient has probably served to limit the downward migration of creosote constituents.

g. Vertical migration potential is upward. Also, it is difficult to establish k of aquifer.

3. Monitor Well Construction

- a. Attachment A-11 -Well construction diagrams.
- b. Attachment A-12 -Table of well construction details.
- c. Do monitor well installation techniques and materials of construction satisfy ~~31 TAC 335.192(c) = (Y/N)?~~ 31 TAC 335.112/
40 CFR Section 265.91 - no.
- d. Comments: See comment 3.d. below

4. Site Ground Water Movement

- a. Attachment A-13 -Water table/Potentiometric Surface Map. (Indicate inferred flow directions directly on map. Include several maps to show the range of observed water level measurements).
- b. Calculate minimum and maximum observed gradients in units of feet/foot. Show on map and list here minimum = .00303 ft/ft
maximum = .01 ft/ft
- c. Attachment A-14 -Calculations of average linear velocity (v) for gradients reported above, showing all assumptions. List results here: $\bar{v}_{\text{minimum}} = 18.8 \text{ ft/yr}$
 $\bar{v}_{\text{maximum}} = 62 \text{ ft/yr}$
- d. Comments: See comment 4.d. below

Site Hydrogeology, comments:

3.d.

The monitor-well system at the W.S. Smith facility was installed by a local water well driller. Driller's logs from the well installations indicated that oily zones were observed above a limestone unit at a depth of approximately 20 feet below land surface. These zones were cemented off, and the wells were installed within the underlying Pawpaw formation to a depth of approximately 100 feet. The wells were gravel packed from approximately 5 feet below the base of the limestone unit to the total well depth. The wells were completed in the top of a grey shale layer which was continuous beneath the site, and probably represents the uppermost Weno clay formation.

The completion zone for this site does not meet the monitoring requirements for the uppermost aquifer as required under 31 TAC 335.112/40 CFR 265.91.

The monitor-well system should have been installed above the limestone layer, which is acting as an aquitard in this area. This will allow a determination of the extent of contamination, and the hydrologic characteristics of this unit.

The lower zone, (Pawpaw) should be monitored for dissolved phase Kool constituents which could be expected to be present in this unit. However, the current monitor-well system is completed over too long an interval (approximately 70 feet) to allow representative sampling of this unit. Wells should be established with short screens (approximately 5 foot) just below the limestone layer to monitor for dissolved phase Kool

Site Hydrogeology, comments: 3d. continued

Creosote Constituents.

Although the PVC wells currently installed at the site are adequate for monitoring the lower zone (Pawpaw formation), PVC would not be appropriate for monitoring the upper zone because of the creosote concentrations likely to be present.

4.d.

Please note that these measurements are for the Pawpaw formation, not the water-table aquifer beneath the site.

Wells MW-4 and MW-5 were not used because of obvious discrepancies in ground surface elevations and water levels.

All wells are currently being re-surveyed at the request of the TWC. It should be further noted that groundwater flow directions submitted in the proposed Groundwater Detection Monitoring System are different from those provided in Attachment A-13 of this CME report. Additional monitor wells or piezometers will be necessary to adequately define groundwater flow directions.

5. Monitor Well Placement *not applicable, See response to 3.d. above.*

a. Indicate distance(s) of upgradient/background well(s) from WMA

b. Are designated upgradient well(s) confirmed as upgradient (Y/N)?
[31 TAC 335.192(a)(1)]

c. Are upgradient well placements adequate to yield samples
representative of background groundwater quality (Y/N)? [31 TAC
335.192(a)(1)(A)], unaffected by WMA (Y/N)? [31 TAC
335.192(a)(1)(B)]

d. Indicate on the site diagram (Att. ___ above) the lateral spacing,
in feet, of downgradient/perimeter monitor wells.

e. Are designated downgradient wells confirmed as downgradient (Y/N)

f. Describe the operator's justification for lateral spacing _____

g. Is the lateral spacing sufficient to satisfy the performance
standard of 31 TAC 335.192(a)(2)? (Y/N). If no, explain in
comments.

h. Indicate on map and tabulate below the distances of down gradient
wells from the edge of WMA along the direction of groundwater flow:

Well									
Distance									
Time									

Calculate groundwater travel time based on v calculated above.

Assuming conservative transport, will each well detect contaminants
during the active life or post-closure care period. Indicate those
wells that will not with (*).

- i. Vertical placement- Indicate on cross-sections (Att A-7,8, above) the screened and gravel-packed intervals of wells and tabulate:

Well	1	2	3	4	5	6	7			
Screen	1. 5'	1. 20'		1. 20'	1. 20'					
length	2. 20'	2. 20'	40'	2. 20'	2. 20'	40'	40'			
	3. 5'									
Aquifer										
thickness	74'	83'	71'	48'	64'	80'	68'			
S/U	U	U	U	U	U	U	U			

S=Satisfactory U=Unsatisfactory

Explain in comments why vertical placement is unsatisfactory ~~+31 TAC~~

~~335.192(e)~~. 335.112/40CFR 265.91

Comments: As explained under 3.d. above, the wells in use at
W.J. Smith are not completed in the uppermost aquifer.
The extensive gravel packs and multiple screens present in
these wells are designed for use as high capacity water
wells. Their completion beneath the limestone aquifer
present at this site renders them unsatisfactory under
requirements of 31 TAC 335.112/40CFR 265.91.

B. Sampling Procedures

31TAC 335.112/40CFR 265.92

1. a. Is a Sampling Plan [~~31 TAC 335.193(a)~~] maintained at the facility? Include a copy as Attachment B-1. Yes ☒ No ☐
- b. Does the plan address the following items:
 - (1) Sample collection procedures Yes ☒ No ☐
 - (2) Sample preservation and shipment Yes ☒ No ☐
 - (3) Analytical procedures Yes ☐ No ☒
 - (4) Chain of custody procedures Yes ☒ No ☐
- c. List deficiencies/omissions/recommended changes:
 1. Analytical procedures should be specified in the Sampling Plan
 2. Methods used to measure water levels should be specified
- d. Does the facility follow the plan during sampling events? Yes ☐ No ☒
If not, describe differences between the plan and actual sampling procedures:
 1. Field measurements of temperature, pH, and specific conductance are specified in the plan, but not conducted in the field.
 2. The same intake hose is used to evacuate every well, but the plan specifies a separate hose for each well (See page 5)
2. Are wells equipped with caps (☒/N), annulus seals (☒/N) to prevent contamination from surface sources? Are the well caps lockable? (☒/N) Caps are bolted on the well casing, but are not provided with locks.
3. Describe how and when measurements of water level and well total depth are made: Water level measurements were made with the bailer used to sample each well. A steel rope was used to measure the distance the bailer was lowered along the string line. Measurements were made prior to evacuating the wells. Total well depth was not measured.
4. a. Describe well evacuation equipment and techniques: Well evacuation was accomplished by use of a gasoline driven centrifugal pump. A rubber intake hose was used and rinsed between wells. The total well volume removed was based on Figure 2 of the Attached Sampling Plan.

b. Are appropriate collection and disposal methods used for bailed water? (Y/N) Describe: Current wells are producing relatively clean water; the water is pumped onto the ground.

c. If the same equipment is used to evacuate each well, describe decontamination procedures: Rubber intake hose is rinsed between wells; pump and discharge hose are not decontaminated.

5. a. Describe the sampling equipment and methodology used to collect samples: Following evacuation of the required three well volumes, separate teflon bailers were used to sample each well. These bailers were decontaminated before use, and stored wrapped in foil. Nylon twine was used to lower each bailer, and was replaced between wells. Sample bottles were filled directly from the bailers.

b. If the same equipment is used to sample each well, describe decontamination procedures: N.A. - Individual teflon bailers are used in each well.

c. Indicate the order in which samples are taken:
1st _____; 2nd _____; 3rd _____;
4th _____;
no specific sampling order was utilized

6. Indicate parameters determined in the field/ on-site lab; within N.A. min./hr. of taking sample:

(Note type of instruments used.) (no field measurements were made)

Temperature N.A.

pH N.A.

Sp. Conductance N.A.

Other No field measurements were taken.

7. a. Describe techniques for field filtration of samples: Metals were preserved, but not filtered, in the field.

b. Parameters filtered: _____

8. Complete the following table for the facility's sampling program:

Container	Preservative	Parameters	S/U
1-liter glass	HNO ₃ / ice	Metals	S
1-liter glass	ice	Organics	S
1-liter glass	H ₂ SO ₄ / ice	Phenols / TOC	S
40ml UOA	ice	Tox	S
100ml Bac-T	ice	Coliform Bacteria	S

(S) = Satisfactory U = Unsatisfactory

Comments: The containers and Preservatives used were appropriate. However, metals should have been field filtered prior to acidification.
also, Tox and coliform bacteria were not sampled during this sampling event.

9. Is the observed sampling methodology adequate for :

- a. Indicator parameters N/A ☐ Yes ☐ No ☒
- b. Quality parameters N/A ☐ Yes ☒ No ☐
- c. Drinking water parameters N/A ☐ Yes ☐ No ☒
- d. Metals N/A ☐ Yes ☐ No ☒
- e. Volatile organics (X); Floating immiscible organics ();
Dense immiscible organics () [check if applicable] :
N/A ☐ Yes ☐ No ☐

- f. Describe possible problems:

9.a. pH is not stable and should be measured in the field
9.c. metals should be filtered prior to acidification
9.d. " " " "
9.e. monitor well construction does not allow sampling of floating or dense organic constituents.

10. Describe any Quality Assurance/Quality Control (QA/QC) procedures used in the facility's sampling program: field blanks are used for QA/QC

11. a. Describe Chain of Custody (C.O.C.) and shipping procedures: Chain-of-Custody procedures have been established as shown in Figures 3 and 4 in the W.I. Smith Sampling Plan presented as Attachment B-1.

b. Attachment B-1: Example of C.O.C. tag or Example of sample identification tag or label.

Attachment _____:

12. Do the C.O.C. and shipping procedures minimize the possibility of tampering with the samples? Yes X No _____

If not, describe possible problems: _____

13. Complete the following items if monitor wells are co-sampled with the facility operator.

a. Person(s) who collected samples for:
Facility Patrick Jolly, Berry Adams, Dan Tanisky
TWC David Smith, David Buchanan, Gerardo Garcia, Caroline Abbott

b. Number of wells co-sampled: 4 of 7 total RCRA wells.

c. Attachment B-2 - TWC Sample Schedule

d. Attachment B-3 - TWC Field Notes

e. Comments: Samples were obtained for GC/MS organics analysis, major ions, and TOC.

TWC Solid Waste Inspection Report
(TAC 335.191-195)GROUND WATER MONITORING CHECKLIST

1. GROUND WATER MONITORING STATUS:

Complete the table for each Waste Management Area (WMA):

WMA	Description	Activity Status	Monitoring Status	Number of Wells
1	W.J. Smith Plant Site (Site 1)	A	detection	U 1 D 6
2	MKT Site (Site 2)	I	none	U D
3				U D
4				U D

Give date of approval for waivers, alternate plan, or assessment plan, as applicable: N.A. (W.J. Smith has submitted a Detection Monitoring Program for the wastewater treatment facilities on July, 1986. This plan is currently under review with their Part B Application.)

2. Provide a diagram locating each monitoring well and waste site(s). List depths, diameter and completion data on each well not included on the previous inspection.3. Has the following been installed in the uppermost aquifer around each Waste Management Area(s): wells not installed in uppermost aquifer ^{us} ***a. At least one hydraulically upgradient well? YES NO Xb. At least three hydraulically downgradient wells? YES NO Xc. Indicate WMA(s) that are not compliant: land 2 (Both sites)

d. Describe possible problems on Comments Sheet.

4. If the WMA includes multiple waste management facilities, is each facility adequately monitored? N/A YES NO X5. Does the facility have a **GW Sampling and Analysis Plan**? YES X NO

Does it adequately address:

a. Sample collection procedures YES X NO b. Sample preservation and shipment YES X NO c. Analytical procedures YES NO Xd. Chain of custody procedures YES X NO 6. Does the facility have an adequate **GW Quality Assessment Plan Outline**? YES NO 7. If the company is performing an alternate groundwater monitoring program or a partial waiver monitoring program, is an approved Sampling and Analysis Plan followed? N/A X YES NO

NOTE: Complete the "GW Sampling Procedures Checklist", when observing well sampling procedures or co-sampling monitor wells at the facility.

*** An entry in this column indicates corrective action/response is needed.

8. Have records been kept of:

- | | | | |
|--|--------------|----------------|---------------|
| a. Analyses for ground water parameters? | | YES <u>X</u> | NO <u> </u> |
| b. Calculations of means and variances? | N/A | YES <u> </u> | NO <u> </u> |
| c. Water surface elevations taken at each well sampling event? | | YES <u> </u> | NO <u>X</u> |
| d. Calculations of significant differences? | N/A <u>X</u> | YES <u> </u> | NO <u> </u> |
| e. Analyses of duplicate samples for contamination confirmation? | N/A <u>X</u> | YES <u> </u> | NO <u> </u> |
| f. Analyses of samples taken as a result of implementing the Ground Water Quality Assessment Plan? | N/A <u>X</u> | YES <u> </u> | NO <u> </u> |
| g. Results of Ground Water Quality Assessment Plan? | N/A <u>X</u> | YES <u> </u> | NO <u> </u> |
| (1). Rates of Migration? | | YES <u> </u> | NO <u> </u> |
| (2). Concentration of hazardous waste and/or constituents thereof? | | YES <u> </u> | NO <u> </u> |
| (3). Analyses of quarterly ground water samples? | | YES <u> </u> | NO <u> </u> |
| h. Copies of annual reports of the groundwater monitoring program? | N/A | YES <u> </u> | NO <u> </u> |

9. Are self-reporting data being submitted on the appropriate TWC forms?

YES NO X

NOTE: Complete the remaining checklists as applicable to each Waste Management Area

Comments: B.C. Water surface elevations were not provided
for the November 29, 1985 Sampling event.

9. W.J. Smith was supposedly not aware of
Self-reporting requirements prior to the Enforcement Conference
on July 11, 1986. Only one set of analyses for the monitor
wells exists (11-29-85). This data was not self-reported, and
was submitted during the enforcement conference on July 11, 1986.

FIRST YEAR BACKGROUND SAMPLING

Waste Management Area(s) W.S. Smith plant site (Site 1)
MKT Site (Site 2; see comment 4.9. below)

1. Are all samples analyzed for: (See comment 1 on following page) ^{us} ***
- EPA Drinking Water Standards? YES X^{us} NO
- Ground water quality parameters? YES X^{us} NO
- Contamination indicator parameters? YES X^{us} NO
2. Are 4 replicate measurements of contamination indicator parameters made for each well sample? YES X NO
3. Are ground water **surface elevations** determined ^{us} at each well sampling event? (See comment 3 on following page) YES X NO

4. Briefly explain why facility is performing first year sampling at this time:

4. W.S. Smith submitted a Part A application in August, 1980.
Because of the inactive status of the MKT area (Site 2), and
the decision to reclaim the storage area and separator, no permit
was issued. The facility was granted interim status pending
closure. A closure plan which included proposed monitor wells
for the W.S. Smith plant site (Site 1) was submitted in December, 1983.
The TWC approved these plans on June 12, 1984 and provided
recommendations for monitor well installations. These wells
were installed in October, 1985. Despite previous TWC directives,
these wells were not completed in the uppermost aquifer. The
first documented sampling of these wells was on November 29, 1985.

us

*** An entry in this column indicates corrective action/response is needed.

us
comments: First Year Background Sampling:

1. The first sampling event conducted on November 29, 1985 included analyses for only phenols, naphthalene, anthracene, and chemical oxygen demand. During the CME, samples were taken for the required background parameters. However, until these analyses are received it will not be known if the required parameters were analyzed, or if the required replicates were measured.
3. Ground water surface elevations were not determined during the November 29, 1985 sampling event. Water levels were measured during the CME conducted on July 23, 1986, but all well elevations are currently being re-surveyed due to obvious discrepancies.

not applicable

TWC Reg. No. 31332

GW SEMI-ANNUAL DETECTION MONITORING

Waste Management Area(s) _____

1. Was the **first year** background sampling program adequately completed? YES ___ NO ___
2. Are wells sampled and analyzed **annually** for ground water quality parameters? YES ___ NO ___
3. a. Are wells sampled and analyzed **semi-annually** for contamination indicator parameters? YES ___ NO ___
- b. Are 4 replicate measurements of indicator parameters made for each upgradient and downgradient well sample? YES ___ NO ___
4. Are ground water **surface elevations** determined at each well for each sampling event? YES ___ NO ___
5. Were ground water surface elevations evaluated **annually** to determine whether monitoring wells are properly placed? YES ___ NO ___
6. Were **changes** to the monitoring system necessary to maintain compliance with 335.192(a)? YES ___ NO ___
If yes, describe in comments. _____
7. Are statistical comparisons, using the Student's t-test at the 0.01 level of significance, performed? YES ___ NO ___
- a. Between the initial background mean and mean of current **upgradient** well analyses for each contamination indicator parameter? YES ___ NO ___
- b. Between the initial background mean and mean of current **downgradient** well analyses for each contamination indicator parameter? YES ___ NO ___
8. If there is more than one upgradient well, are all the background data combined resulting in one background mean with variance for each contamination parameter or is each upgradient well mean and variance compared separately with downgradient well analyses?
Circle the appropriate phrase.
9. Have significant increases (or pH decreases) in contamination indicator parameters been found in the:
- a. Upgradient wells? YES ___ NO ___
- b. If yes, did the company report the upgradient well change on the annual report form? YES ___ NO ___
- c. Downgradient wells? YES ___ NO ___

*** An entry in this column indicates corrective action/response is needed.

10. If significant increases (or pH decreases) in downgradient wells were detected, did the company:

a. Resample the "affected" well(s), split the sample in two, and re-analyze for the parameter(s) that showed significant difference? ***

N/A ___ YES ___ NO ___

b. Confirm the significant difference?

N/A ___ YES ___ NO ___

c. Notify the Executive Director within 7 days of confirmation?

N/A ___ YES ___ NO ___

d. Submit a certified Ground Water Quality Assessment Plan within 15 days of notifying the Executive Director?

N/A ___ YES ___ NO ___

11. Has the facility resumed detection monitoring at this WMA after determining in an assessment that no hazardous waste or constituents were detected in ground water?

N/A ___ YES ___ NO ___

b. If yes, when was detection monitoring resumed? _____

NOTE: Complete "GW Assessment Monitoring Checklist" if detection monitoring was resumed since the last inspection.

12. Has the facility modified the t-test procedure to reduce the occurrence of "false positive" statistical indications?

YES ___ NO ___

b. Describe changes in comments or include attachments.

c. Date of TWC approval _____

13. Has the facility substituted other parameters in place of pH, conductivity, TOC and/or TOX?

YES ___ NO ___

b. List the parameters: _____

c. Date of TWC approval _____

Comments: _____

not applicable

TWC Reg. No. 31332

GW ASSESSMENT MONITORING

Waste Management Area(s) _____

- ☒ Has the facility started to implement an approved Ground Water Quality Assessment Plan? N/A ___ YES ___ NO ___ ***
Give date plan was started _____.

- ☒ If the plan is in progress, give projected completion date _____ and describe actions to date: _____

a. Is the facility on schedule? N/A ___ YES ___ NO ___

- ☒ If the plan has been completed, give date of Ground Water Quality Assessment report: _____

- ☒ Do results indicate that hazardous waste or constituents have been detected? N/A ___ YES ___ NO ___

a. If yes, has a Quarterly Assessment Monitoring Program been implemented? YES ___ NO ___

b. If no, was detection monitoring reinstated? YES ___ NO ___

c. If the facility has not responded appropriately, explain why in comments.

NOTE: If answer to 4b is yes, Stop Here.

- ☒ List the hazardous waste constituents detected: _____

- ☒ Has the facility Sampling and Analysis Plan been revised to include these parameters? N/A ___ YES ___ NO ___

- ☒ Quarterly, since completion of the assessment, has the facility continued to:

a. Sample and analyze for hazardous waste or constituents? N/A ___ YES ___ NO ___

b. Determine rate and extent of migration of hazardous waste or constituents? N/A ___ YES ___ NO ___

*** An entry in this column indicates corrective action/response is needed.

8. Yearly, has the facility reported the results of the assessment program (with annual waste report), to include the calculated (or measured) rate of migration of hazardous waste or constituents in ground water during the reporting period? N/A___ YES___ NO___ ***
9. If t-test failures have occurred at the WMA during its post-closure care period, has facility complied with:
- a. Retesting to confirm t-test failures? N/A___ YES___ NO___
 - b. Notifying TWC within 7 days of confirmation? N/A___ YES___ NO___
 - c. Submittal of approved plan? N/A___ YES___ NO___
 - d. Completion of approved plan? N/A___ YES___ NO___
10. Does the WMA contain a "regulated unit"* subject to 40 CFR 264 Subpart F compliance monitoring requirements? N/A___ YES___ NO___
- a. If yes, has the assessment detected hazardous waste or constituents in ground water at this WMA? N/A___ YES___ NO___
 - b. If yes has the facility sampled and analyzed for all hazardous waste constituents (Appendix VIII, 40 CFR 261) to characterize the plume in accordance with 40 CFR 270.14(c) (4)? N/A___ YES___ NO___
 - c. If no, report this information to the TWC Groundwater Enforcement Unit in the Central Office.

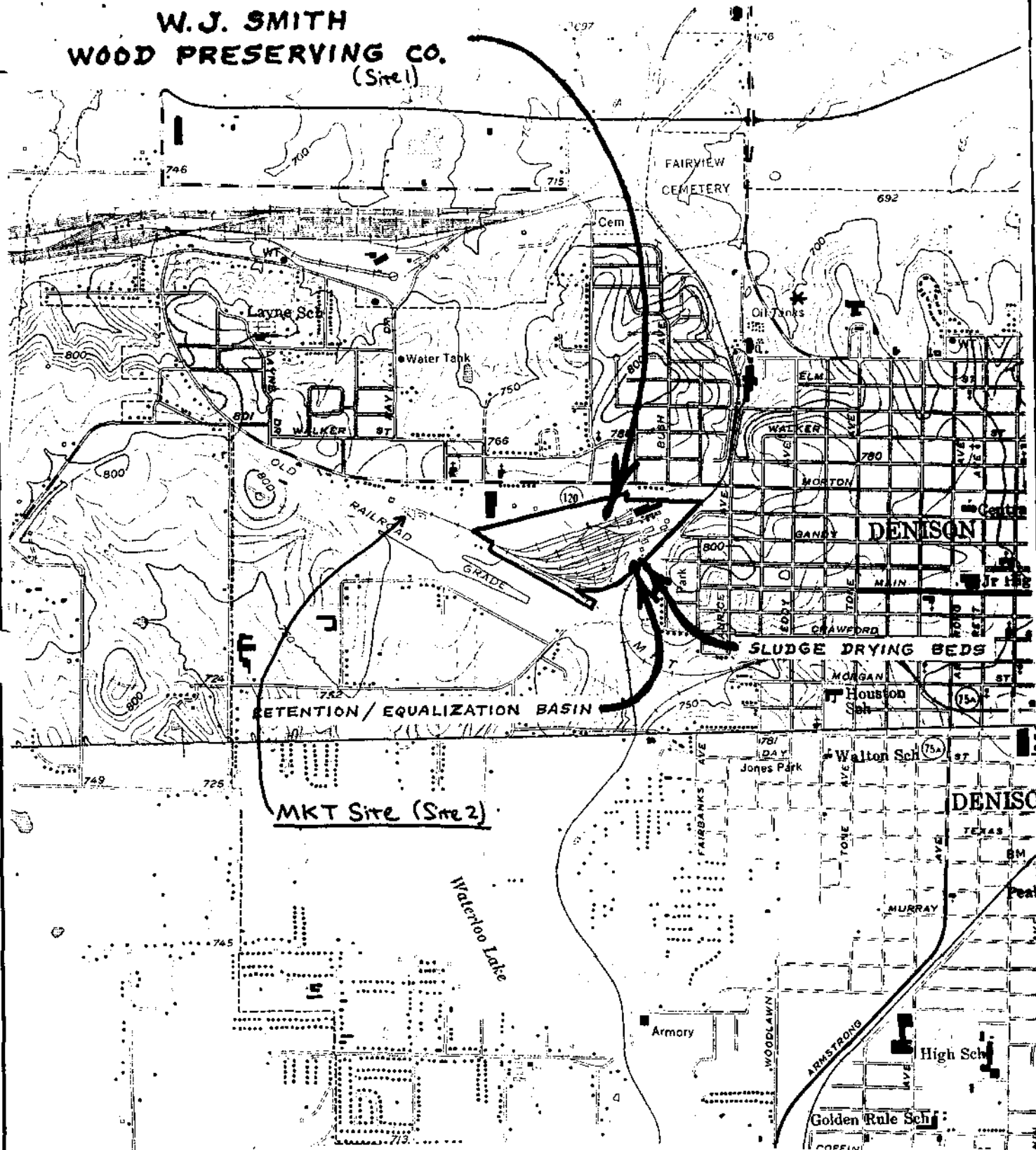
Comments: _____

* Land Disposal facility that received hazardous waste after July 26, 1982.

*** An entry in this column indicates corrective action/response is needed.

Section A Attachments - Monitoring System

**W.J. SMITH
WOOD PRESERVING CO.
(Site 1)**



Sherman 15' Quad
1:24,000

TEXAS WATER COMMISSION
District No. Central Office

ATTACHMENT A-1
Site Topography

Table 1 -- ENGINEERING INDEX PROPERTIES*,¹

SOIL NAME	DEPTH	USDA TEXTURE	CLASSIFICATION		PERCENT PASSING 200 SIEVE	LIQUID LIMIT	PLASTICITY LIMIT
			UNIFIED	AASHTO			
(27) Crosstell	0-3"	Fine Sandy Loam	SM, ML, SM-SC, CL-ML	A-2-4 A-4	28-60	<31	NP-7
	3"-43"	Clay	CH, CL	A-7-6	51-75	42-60	25-40
	43"-60"	Stratified Clay to weathered bedrock	CH, CL, SC	A-7-6 A-6	36-88	35-55	15-35
(36) Gassil	0-10	Loamy Fine Sand	SM, SM-SC	A-2-4, A-4	20-40	<20	NP-4
	10-66	Sandy Clay Loam Loam, Fine Sandy Loam	CL, SC, CL-ML SM-SC	A-6, A-4	36-71	22-44	7-20
(62) Sanger	0-23"	Clay	CH	A-7-6	75-95	51-70	28-42
	23-49	Clay-Silt Clay	CH, CL	A-7-6; A-6	85-100	40-60	20-36
	49-65	Clay-Silt Clay	CH, CL	A-7-6; A-6	85-100	40-55	20-35

*Source: United States Department of Agriculture Soil Conservation Service.

1 Unit #69 is designated as Urban Land, installation of works on
structures does not allow identification or classification of soils.

Table 11 -- PHYSICAL AND CHEMICAL PROPERTIES*

SOIL NAME	DEPTH (IN)	CLAY<2mm (PCT)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K Y	WIND ERODIBILITY GROUP	ORGANIC MATTER (PCT)
(27) Crosstell	0-3	5-15	0.6 - 2.0	0.10 - 0.14	5.6 - 7.8	LOW	0.43 3	3	<1
	3-43	40-60	< 0.06	0.14 - 0.18	4.5 - 8.4	HIGH	0.37 3		
	43-60	40-60	< 0.06	0.14 - 0.18	6.6 - 8.4	HIGH	0.37		
(36) Gasil	0-10	5-12	6.0 - 2.0	0.07 - 0.11	6.1 - 7.8	LOW	0.20 5	2	<1
	10-66	15-35	0.6 - 2.0	0.12 - 0.19	5.1 - 6.5	MODERATE	0.32		
(62) Sanger	0-23	40-60	< 0.06	0.12 - 0.18	7.4 - 8.4	HIGH	0.32 5	--	1 - 3
	23-49	40-60	< 0.06	0.12 - 0.18	7.9 - 8.4	HIGH	0.32		
	49-65	40-60	< 0.06	0.12 - 0.18	7.9 - 8.4	HIGH	0.32		

*Source: United States Department of Agriculture Soil Conservation Service.

Table III -- SOIL AND WATER FEATURES^{*2}

SOIL NAME	HYDROLOGIC ^{*1} GROUP	FLOODING			HIGH WATER TABLE			BEDROCK	
		FREQUENCY	DURATION	MONTH	DEPTH	KIND	MONTHS	DEPTH	HARDNESS
(27) Crosstell	D	None	--	--	>6.0'	--	--	>60'	--
(36) Gasil	B	None	--	--	>6.0'	--	--	>60'	--
(62) Sanger	D	None	--	--	>6.0'	--	--	>60'	--

^{*1} HYDROLOGIC SOIL GROUPS

A - Soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They are mainly deep, well drained, and sandy or gravelly.

Other Extreme: D - Soils having a very slow infiltration rate and thus a high runoff potential. They have a clay-pan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other material.

^{*2}Source: United States Department of Agriculture Soil Conservation Service.

Attachment A-3

SITE DRAINAGE - W.J. SMITH FACILITY

The W. J. Smith Facility (Site 1) lies within the drainage area of Iron Ore Creek in the upper end of the watershed. The drainage area directly above W. J. Smith is minimal with all water collected above Morton Street transferred either easterly or westerly around the W. J. Smith facility.

Drainage below Morton Street is sheet flow and is directed in either an easterly or westerly direction on the W. J. Smith property. Water directed in a westerly direction eventually turns southward and is transported off-site in the unnamed creek labeled "A" (see attached). Slope of the property through this area ranges from 1 to 1.5%. Water flow easterly is collected in a minor swale and is transported in a southwesterly direction parallel to the MKT spur. Slope of the property through this area is about 1.25%. This unnamed creek labeled "B" ends up as the headwaters of Iron Ore Creek.

The ultimate disposition of drainage water is Waterloo Lake which is located approximately two miles south-southwest of the W. J. Smith site (see Figure 1).

Maximum elevation of the site 765 feet MSL at the northern most point, and the minimum elevation is 740 feet MSL at the southernmost point prior to exiting the site.

The MKT site (Site 2) is located directly west of the main plant site (Site 1). This area consists of a series of seven wastewater lagoons which have been closed. Runoff from above this area flows through a concrete culvert buried through the lagoon area to the unnamed creek shown as "A" (see attachment). This creek flows to Waterloo Lake.

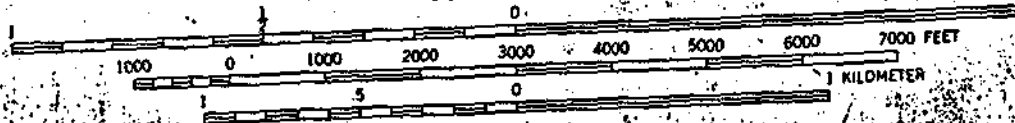
SURFACE WATER LOCATOR MAP

W.J. SMITH FACILITY (Site 1)

CLOSEST SURFACE WATER

678
Waterloo Lake

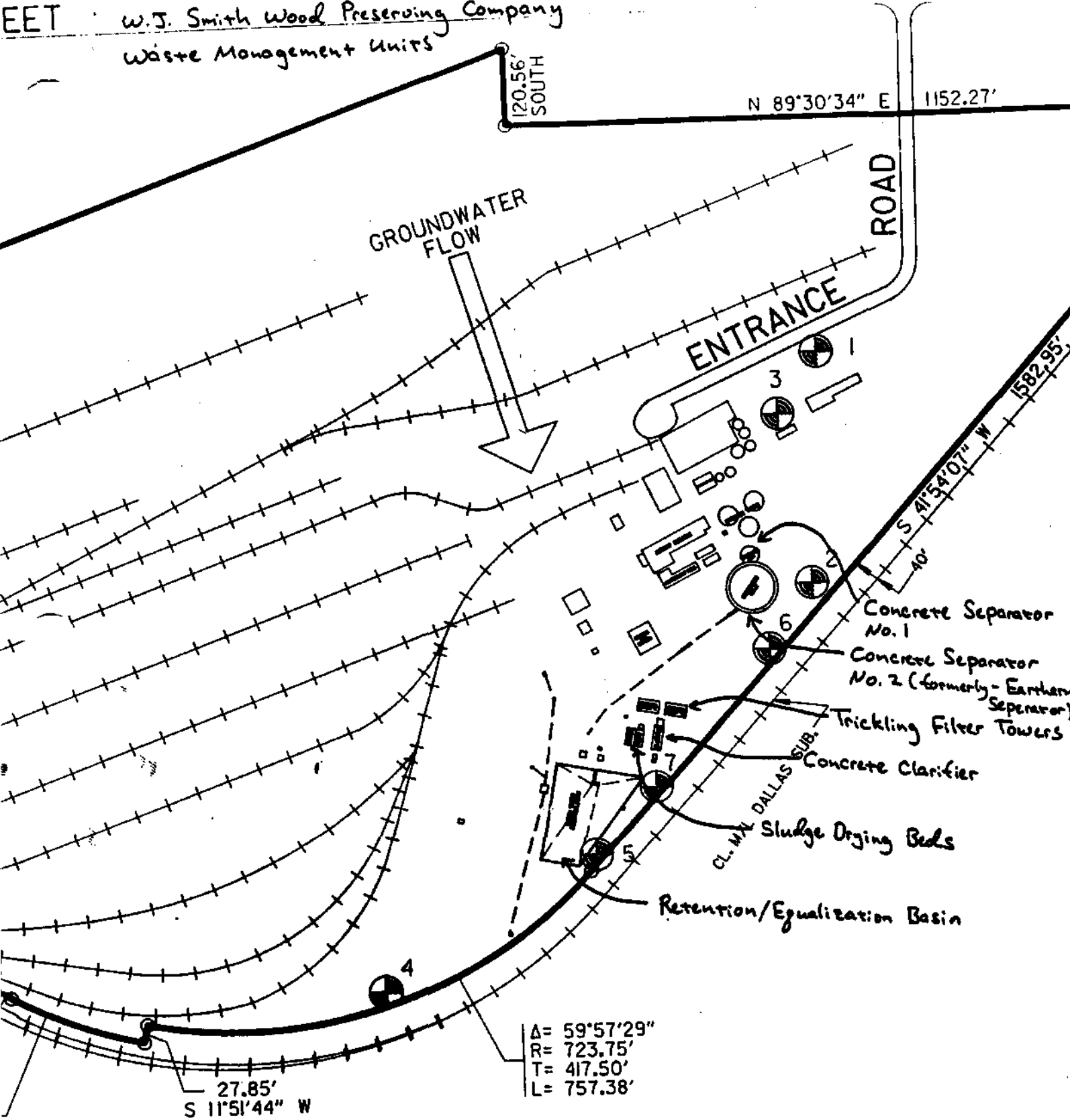
SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Attachment A-3

EET W.J. Smith Wood Preserving Company
Waste Management Units



SITE PLAN

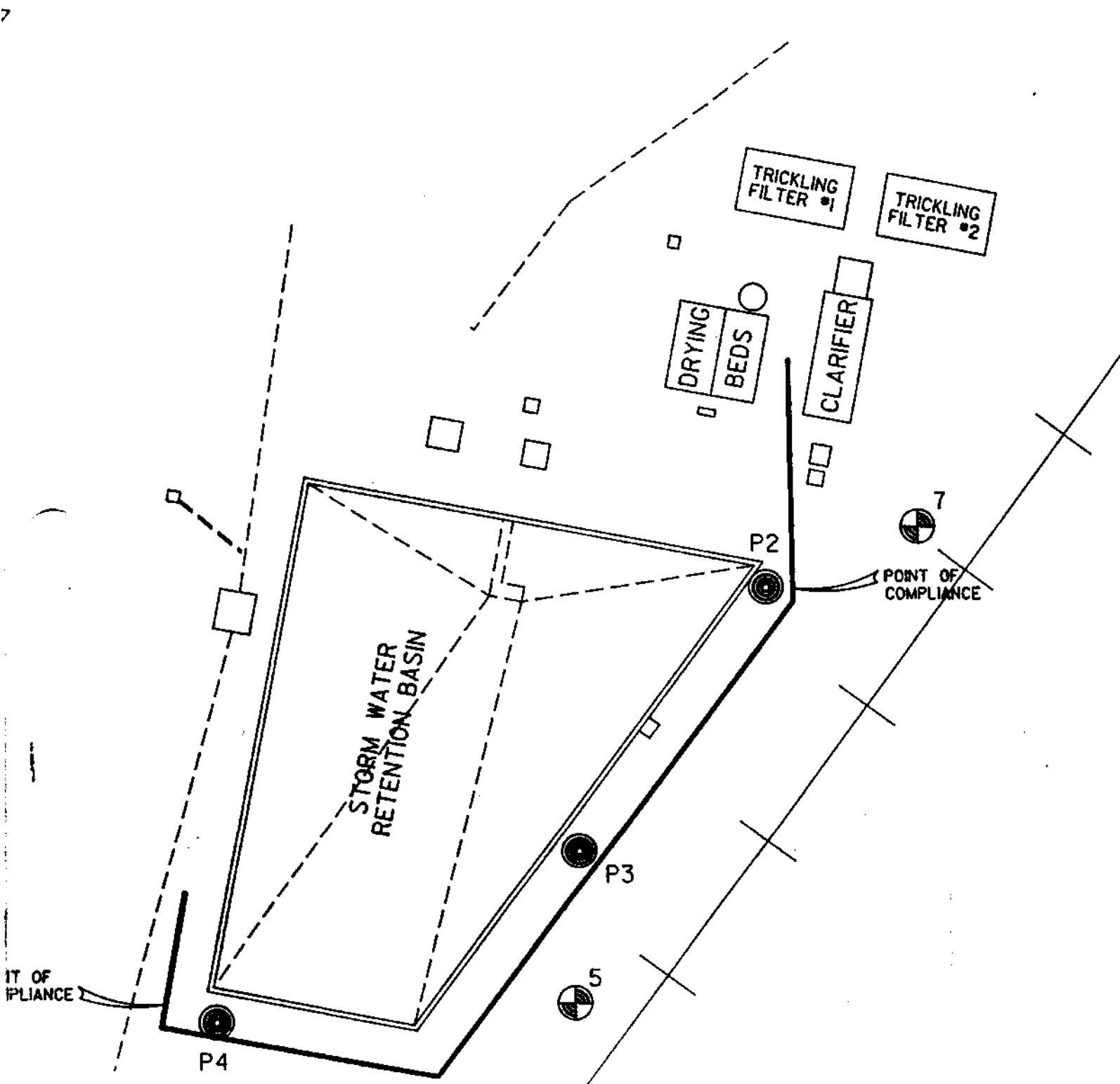
SCALE: 1" = 200'

Existing Monitor Well

from: Proposed Ground Water Detection System;
albert H. Haile Associates, Inc.
April 17, 1986

Attachment A-4

W. J. Smith Wood Preserving Co.
Denison, TX



3m: Proposed Ground Water Detection System
Albert H. Haff Associates, Inc.
April 17, 1986



- Existing Monitor Wells
- Proposed Monitor Wells

WASTEWATER TREATMENT FACILITIES

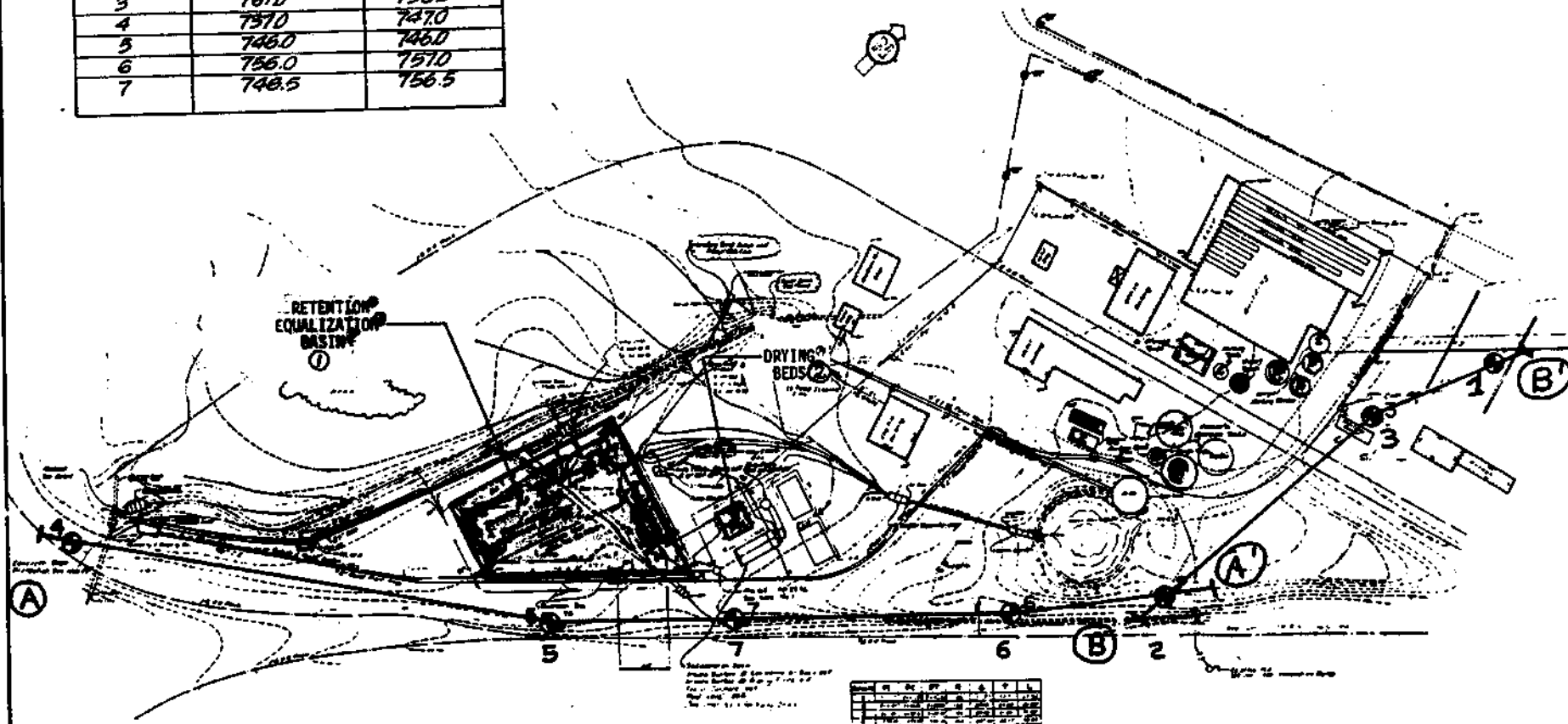
SCALE: 1" = 40'

Attachment A-5

GROUND-WATER MONITORING WELL LOCATION MAP

Well No.	Ground Elev.	W.S. Elev.
1	771.0	759.0
2	760.5	757.5
3	761.0	758.0
4	757.0	747.0
5	746.0	746.0
6	756.0	757.0
7	748.5	756.5

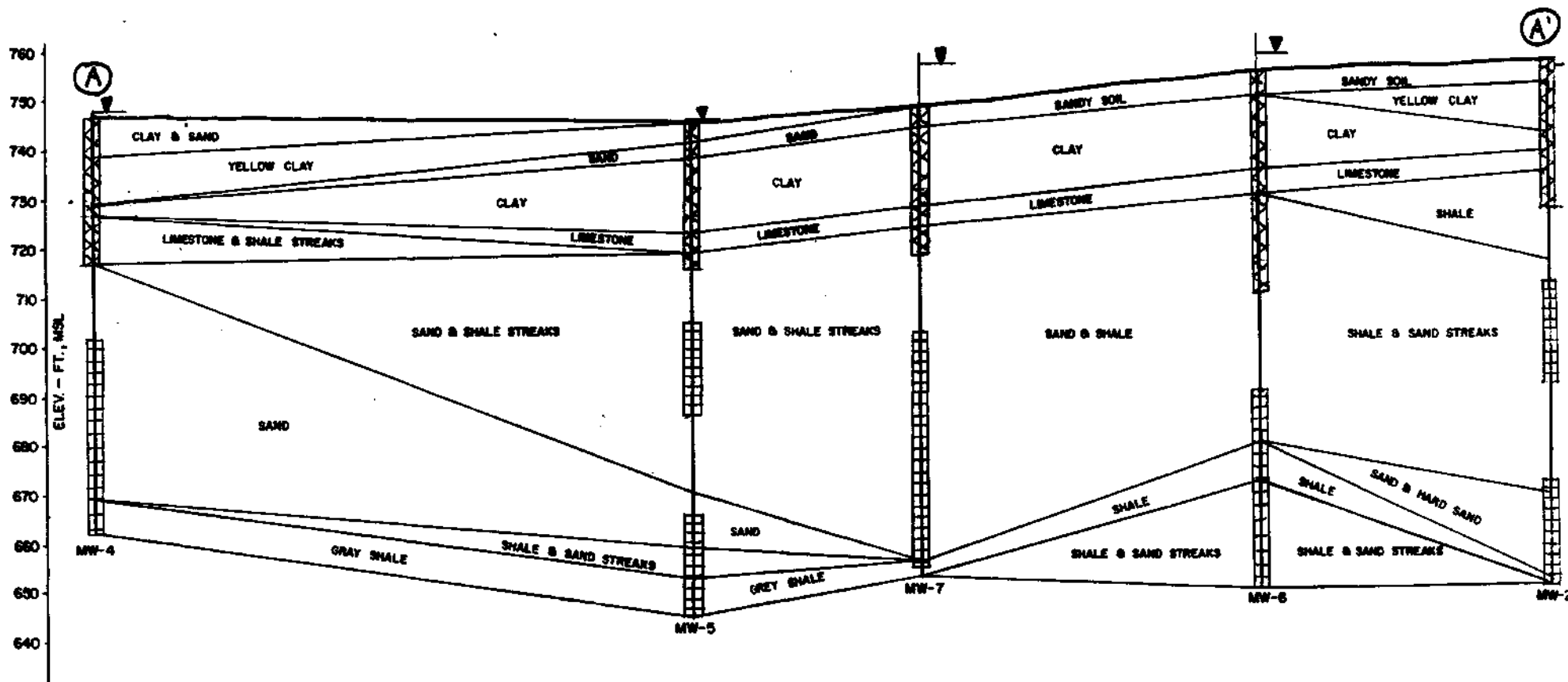
Ground Water Monitoring Well



- NOTES:
1. All Flow Flows into Retention Basins shall be a minimum of 4 inches above the top of the basin and shall remain 1 inch above the basin.
 2. Flow Flows shall have a minimum of 4 inches above the basin.
 3. Current flow Flows shall be 4 inches above the basin and shall remain 1 inch above the basin.

From: W.J. Smith Part B Application
Appendix B

PHASE I PLAN					
W.J. SMITH WOOD PRESERVING PLANT					
WASTEWATER DISPOSAL SYSTEM					
DENISON, TEXAS					
ALBERT H. WHITE ENGINEERS, INC. - D-100-0000					
DATE	REVISION	BY	DATE	REVISION	BY
1/78					



SECTION A-A'

FIG. 14

SCALE: H 1" = 80'
V 1" = 20'

▽ water level



cemented zone

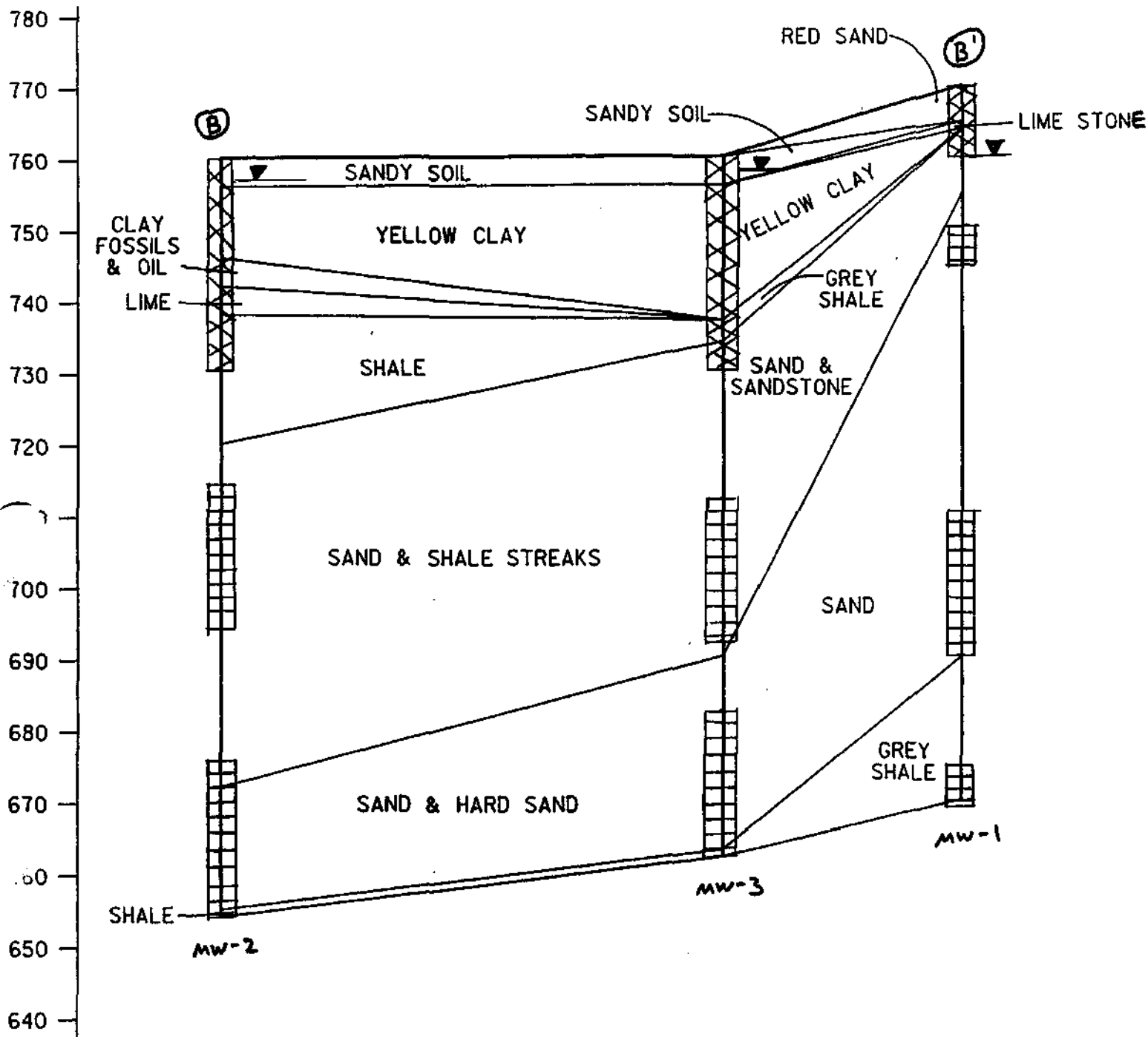


well screen location

water levels and well construction details
adapted from W.J. Smith Proposed Groundwater
Detection Monitoring Program April, 1986

Attachment A-7

from: W.J. Smith Part B Application
Appendix B



SECTION B-B'

▽ water level (approx.)



cemented zone



well screen location

from: W.J. Smith Part B Application
Appendix B

Attachment A-8

water levels and well construction
details adapted from W.J. Smith
Proposed Groundwater Detection Monitoring
Program April, 1986.

H = 1"=60'
V = 1"=20'

Attachment A-8

MKT Site Description

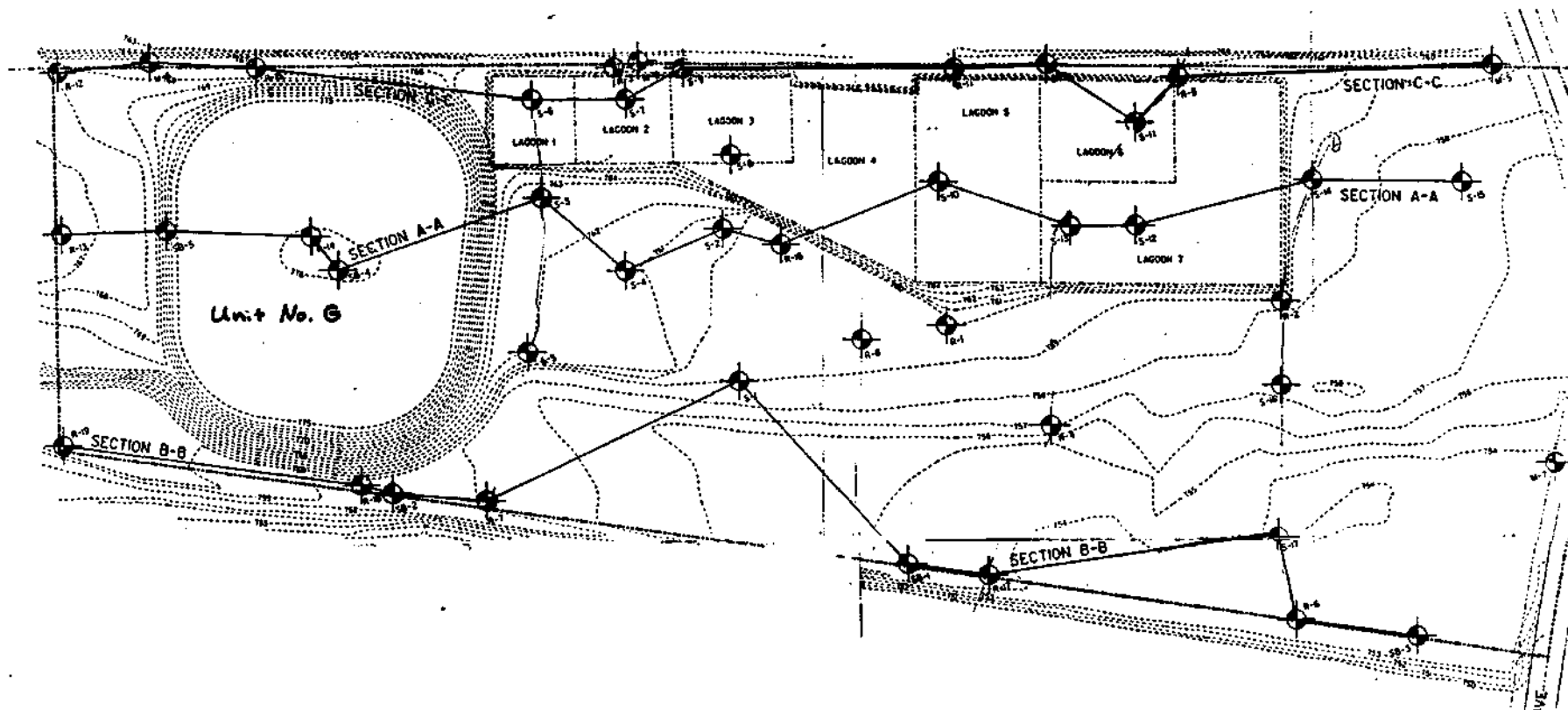
1. Lagoons "Earthen Basins" Part B Unit No. F

The lagoons No. 1 through No. 7 on the following page were operated by W. J. Smith from 1909 until 1969. These lagoons cover approximately 3.5 acres and are unlined, excavated pits. The lagoons are located approximately 150 feet west of W. J. Smith on property owned by Missouri Kansas Texas (MKT) Railroad. Recent investigations have documented soils contamination by phenols at depths of 43 feet beneath the lagoons. The lagoons are currently undergoing closure through enforcement action. No ground water monitoring system currently exists for these lagoons.

2. Disposal Pits and Mounds - Part B Unit No. G

The 3.8 acre landfill located immediately west of lagoon No. 1 has been constructed with a compacted clay liner to receive the stabilized wastes from closure of lagoons No. 1 through No. 7. This landfill is currently full and has been capped and vegetated. An additional landfill cell will be constructed following determination of the total volume of sludge and underlying soils which must be removed from the lagoons.

W. J. Smith Lagoons "Eastern Basins"
MKT Site



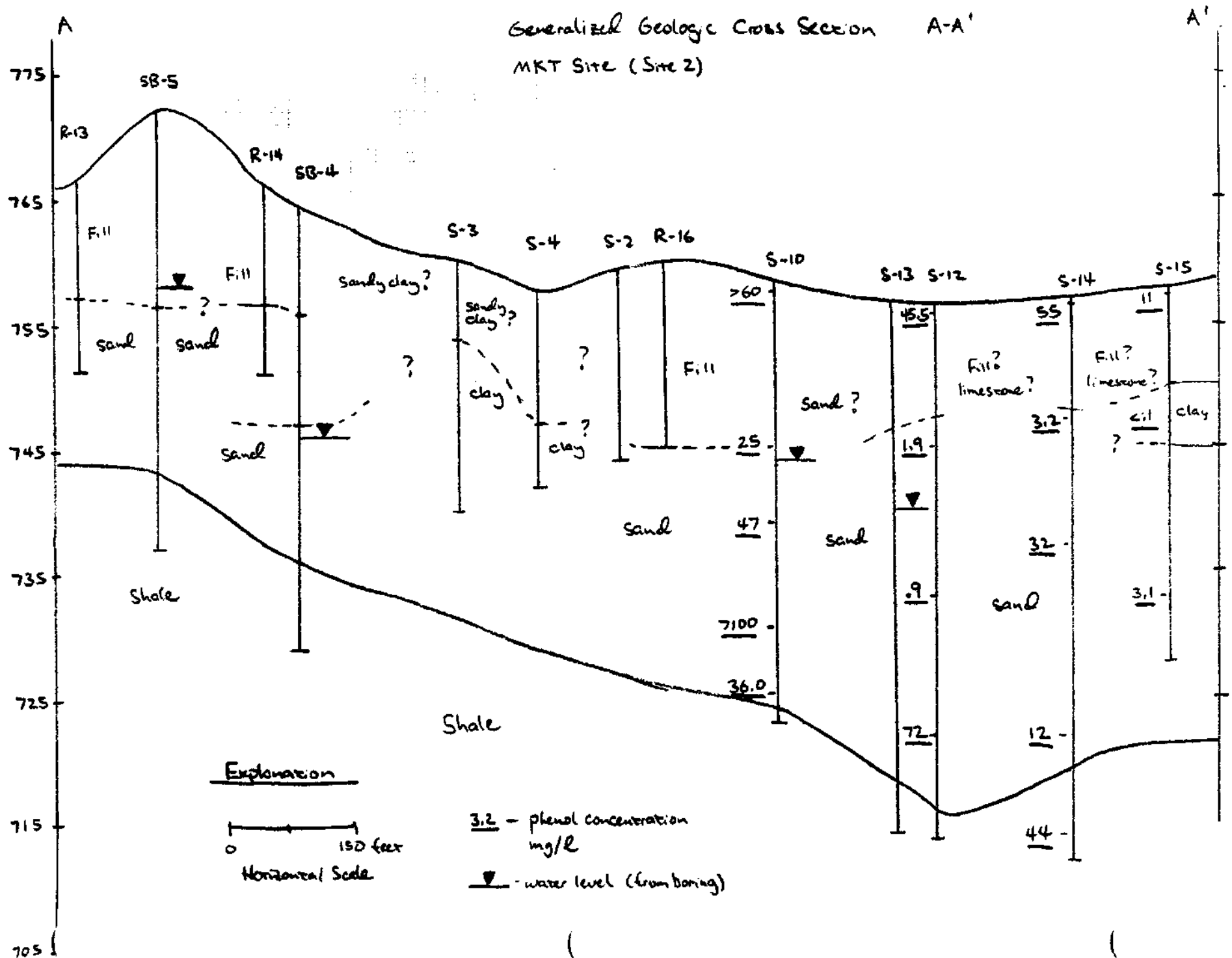
Attachment A-9

from: W. J. Smith Closure Plan Update,
Albert H. Halff Associates, Inc.
Jan. 20, 1986

Attachment 4-9

Generalized Geologic Cross Section A-A'

MKT Site (Site 2)



ATTACHMENT A-11

Well Construction Diagrams



ALBERT H. HALFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

Made by

Date

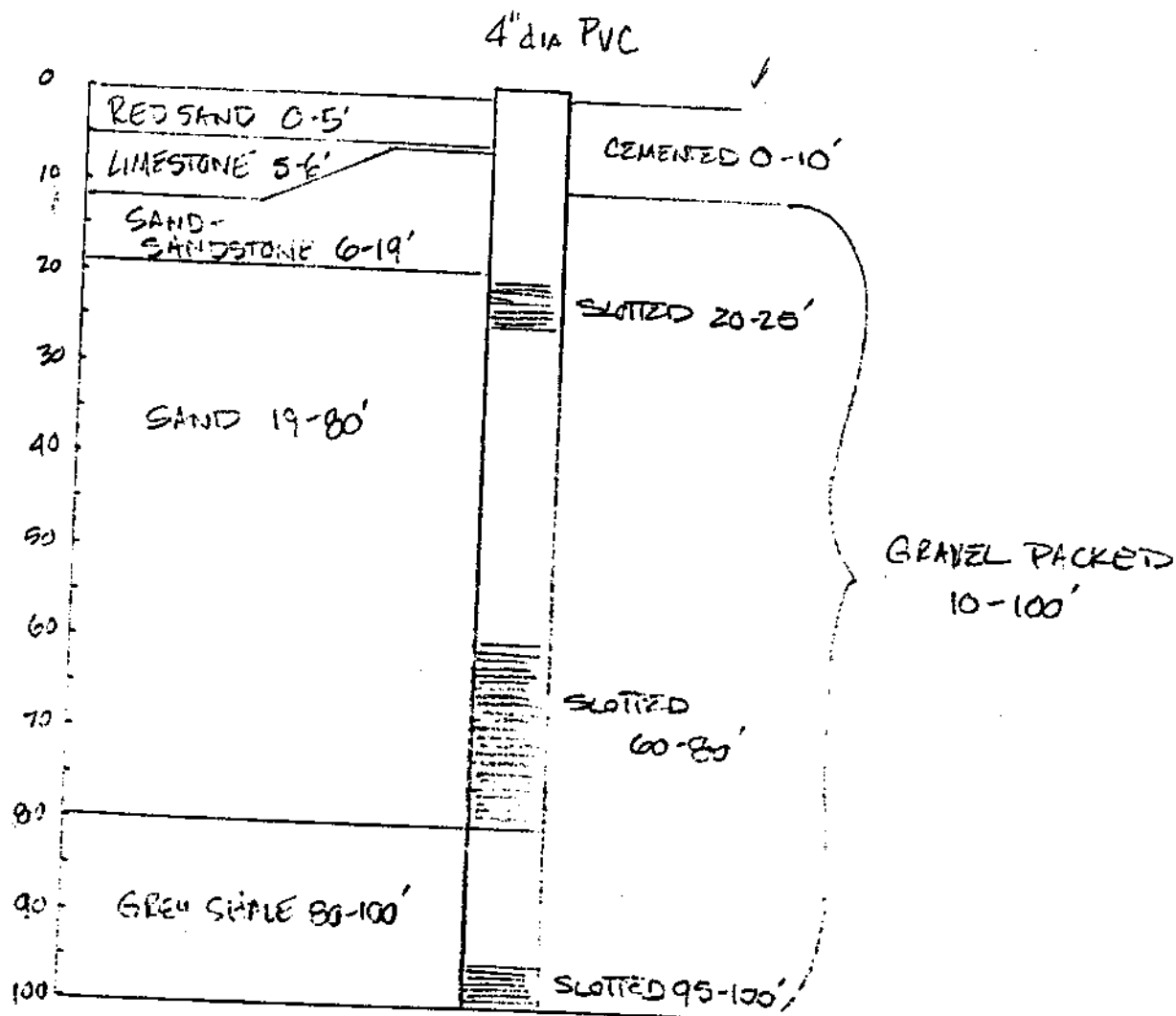
AVG. Test. Dep.


Checked by

Date

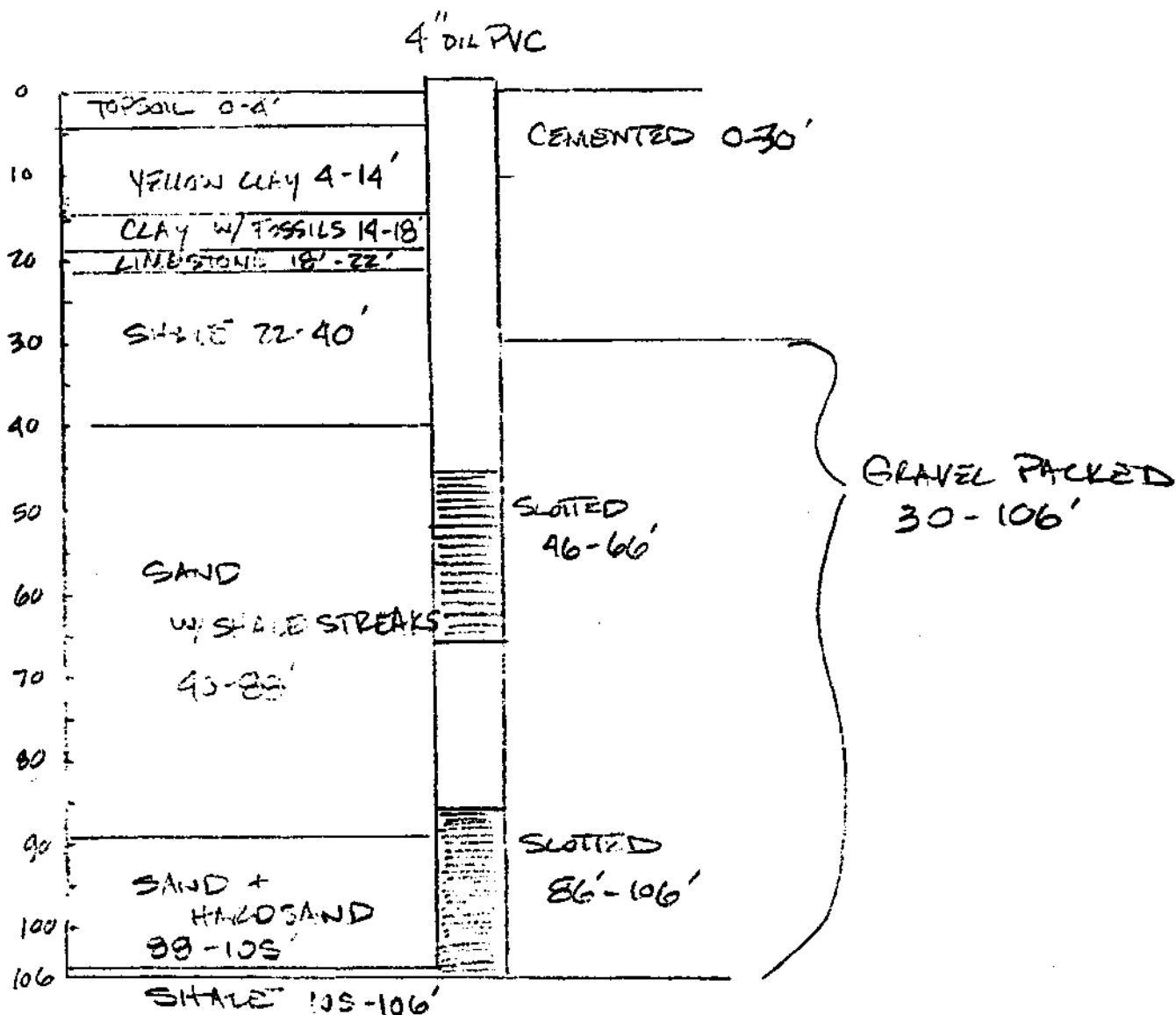
Sheet No.


For MAYAGUAY VELL #1 -- W.J. SMITH WOOD PROCESSING CO.



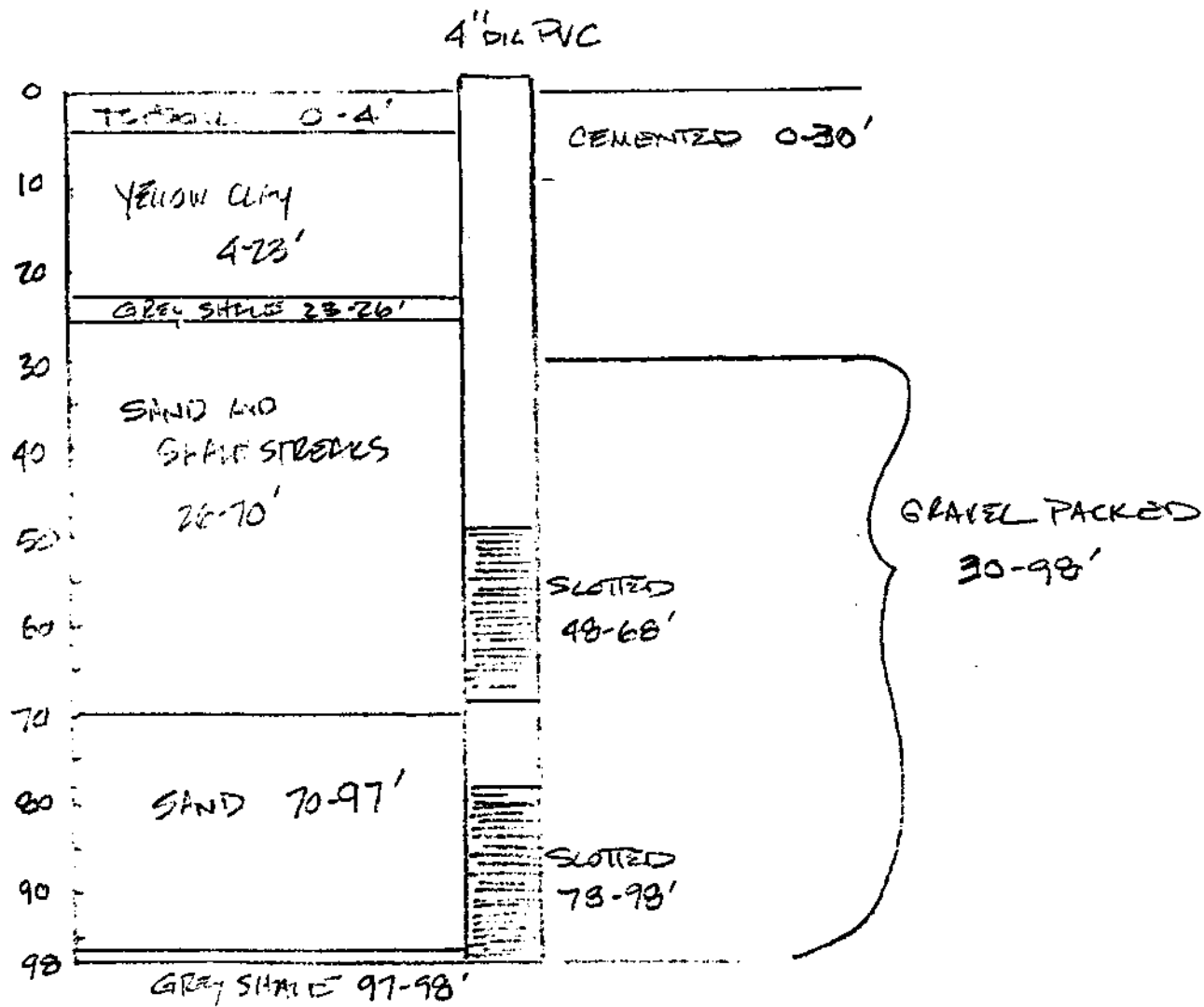
 ALBERT H. HALL ASSOCIATES, INC. ENGINEERS AND SCIENTISTS	Made by	Date	AVO	Test	Dept
	Checked by	Date	Sheet No		


MONITORING WELL # 2 - W.J. SMITH WOOD PRESERVING CO.



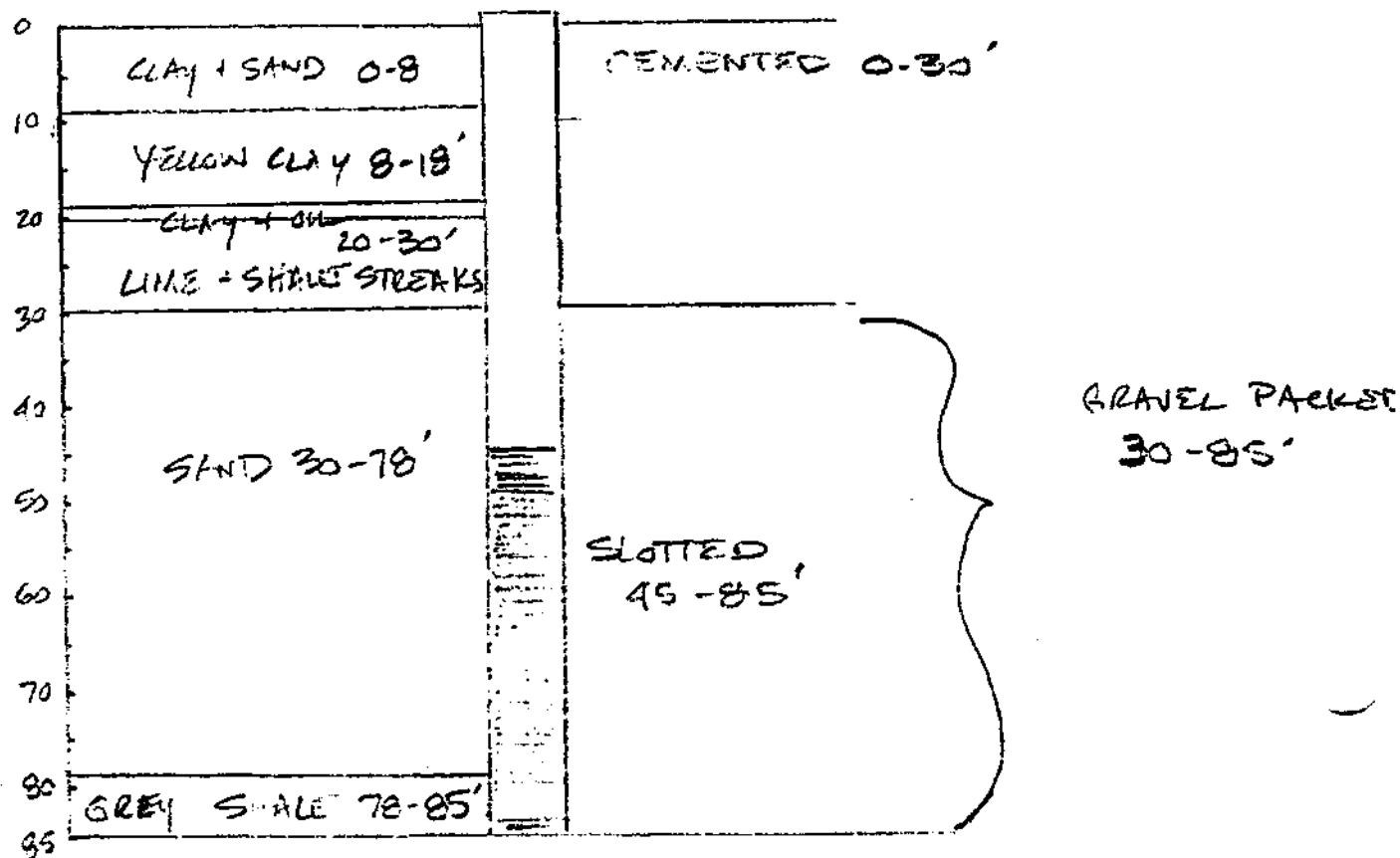
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MONITORING WELL # 3 - W.J. SMITH WOOD PRESERVING Co.



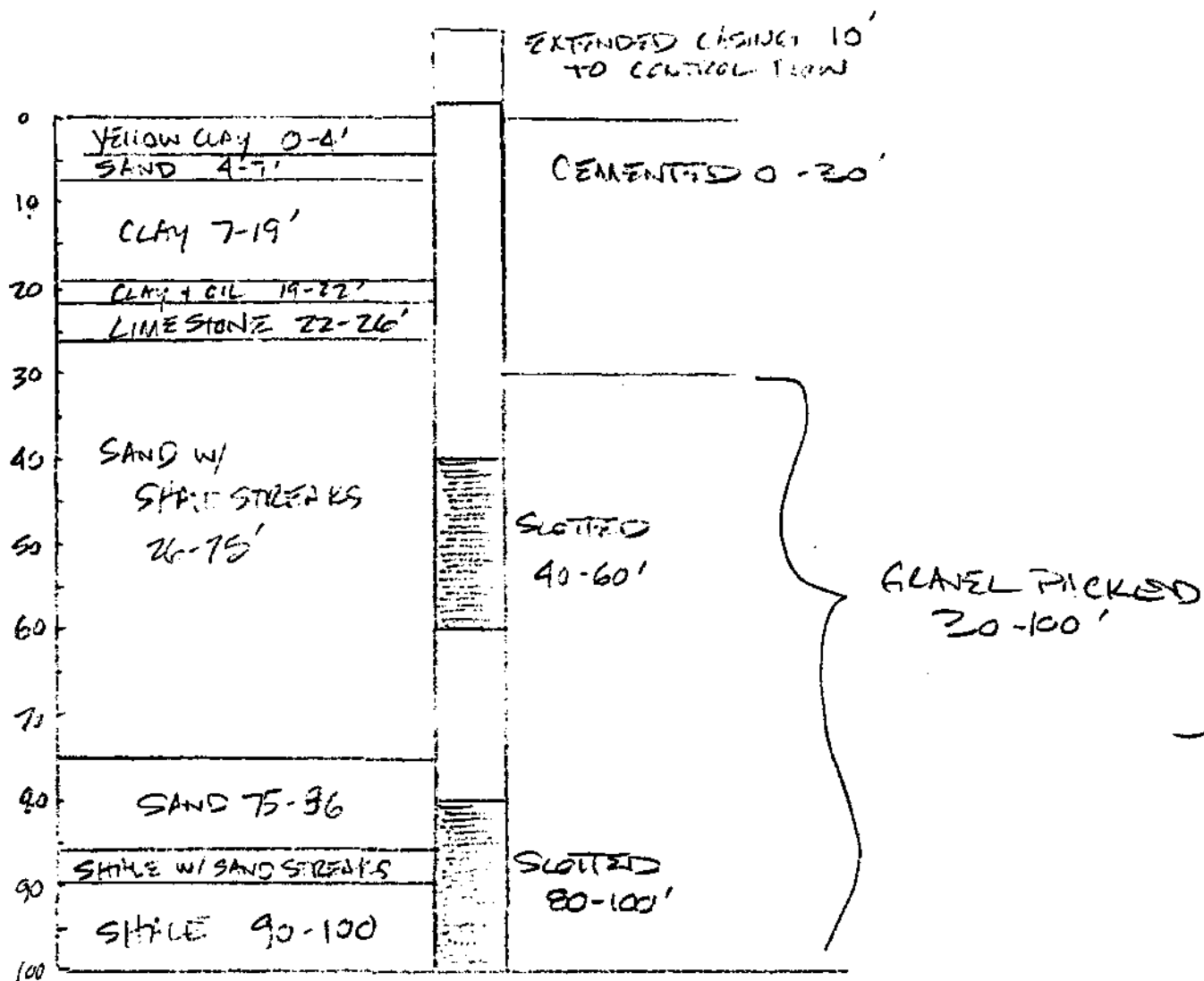
 ALBERT H. HALFF ASSOCIATES, INC. ENGINEERS AND SCIENTISTS	Made by _____	Date _____	AVO	Task	Dept
	Checked by _____	Date _____	Sheet No. _____		

For MONITORING WELL # 4 - W.J. SMITH WOOD PRESERVING CO.



	ALBERT H. HAUFF ASSOCIATES, INC.	Made by	Date	Avi	Test	Dep.
	ENGINEERS AND SCIENTISTS	Checked by	Date	Sheet No.		

11) HUSK 167 Well #5 - W.J. SMITH WOOD PRESERVING CO.





ALBERT H. HAFF ASSOCIATES, INC.
ENGINEERS AND SCIENTISTS

Made by

Date

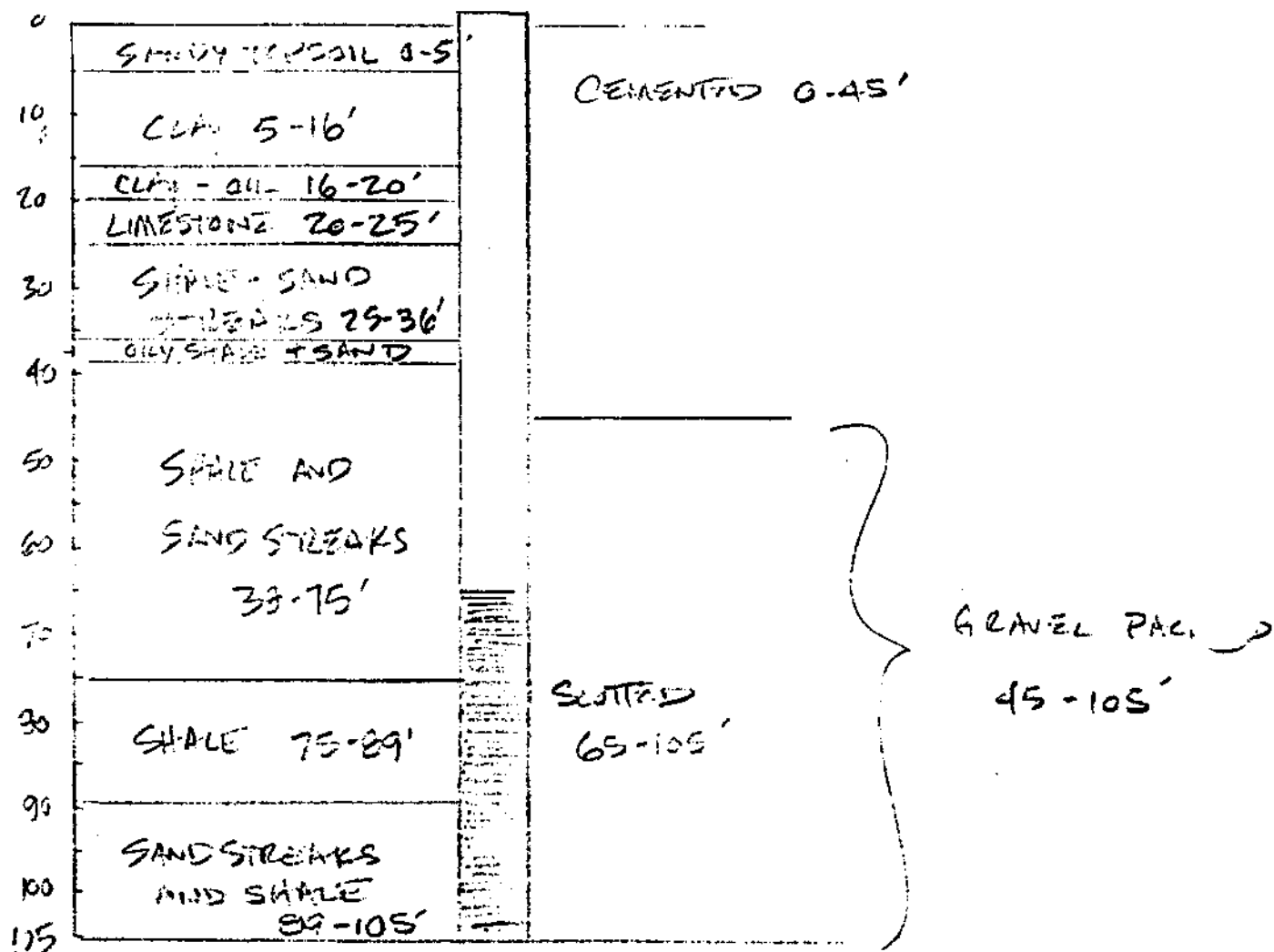
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Date

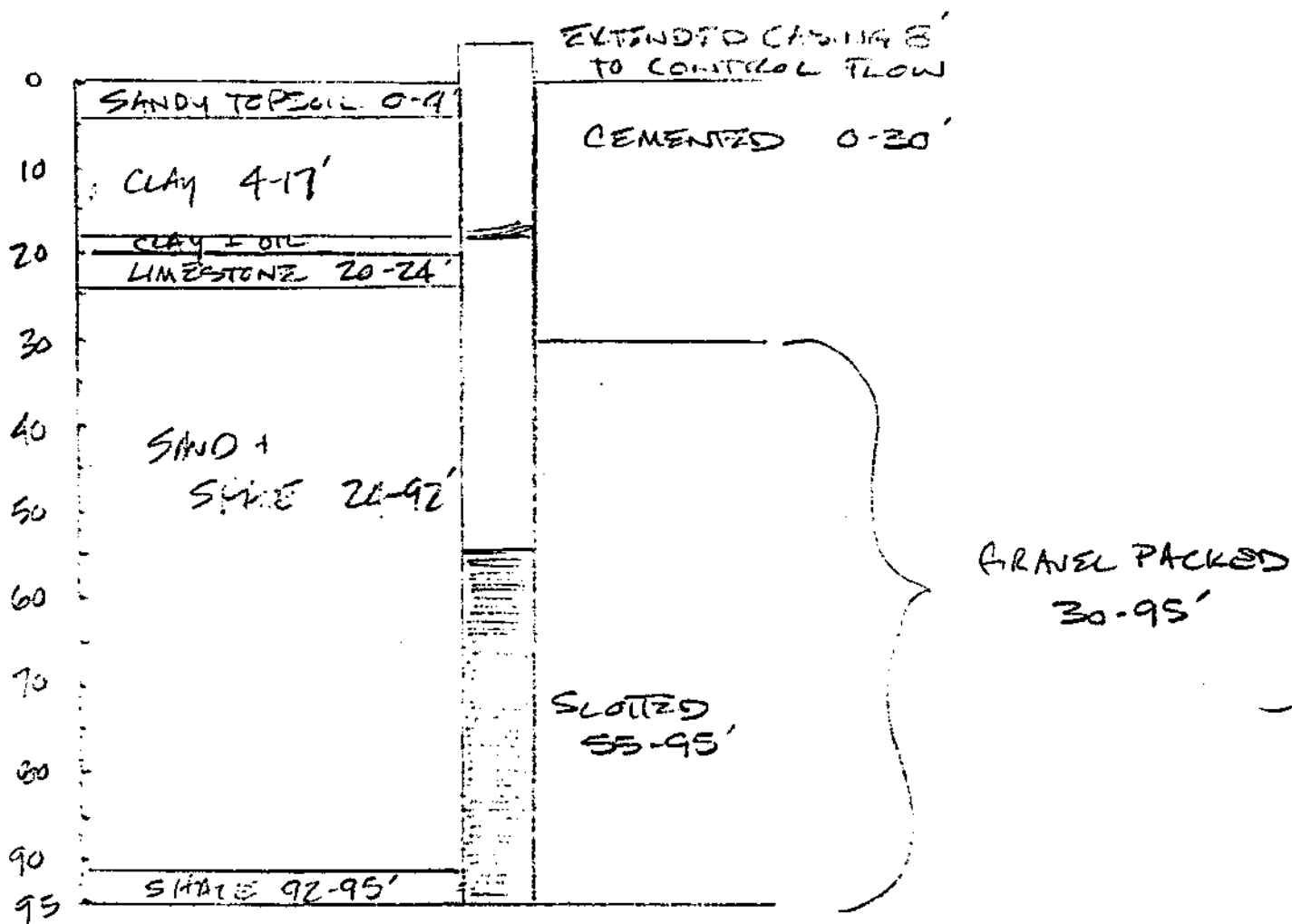
Sheet No

For HIGHWAY 17711 - 6 - W.J. SMITH WOOD PILING CO.



	ALBERT H. HALFF ASSOCIATES, INC.	Made by	Date	AVO	Task	Seg.
	ENGINEERS AND SCIENTISTS	Checked by	Date	Sheet No.		

For MCHITCOKENY WELL # 7 - J. SMITH WOOD PILE PILING CO.



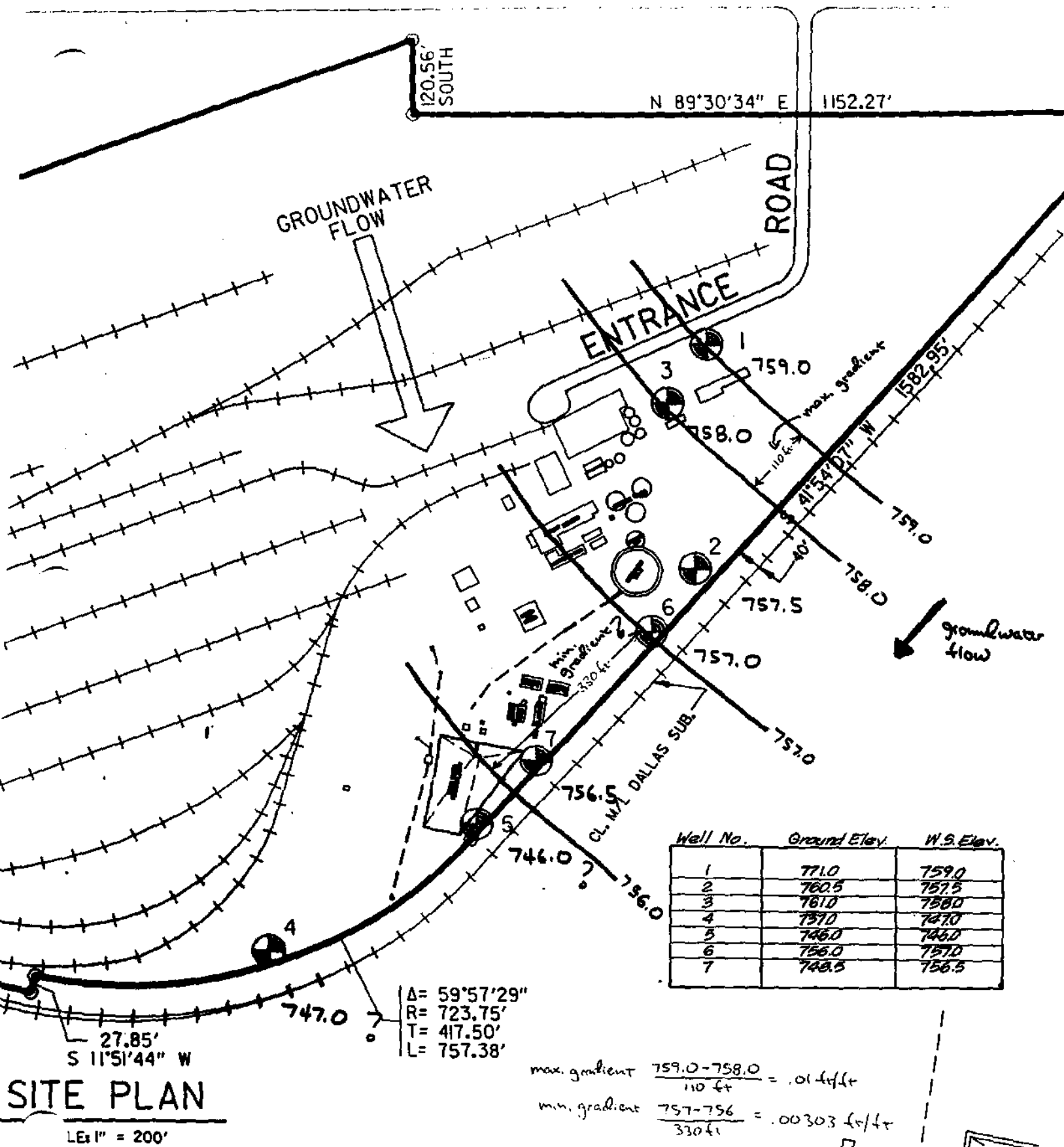
Attachment A-12. Table of Well Construction Details

Well Number	1	2	3	4	5	6	7	
Hole diameter	8"	8"	8"	8"	8"	8"	8"	
Total depth	100'	106'	98'	85'	100'	105'	95'	
Drill method	mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	
Date drilled	10-17-85	10-18-85	10-22-85	10-23-85	10-24-85	10-25-85	10-26-85	
Casing I.D.	4½"	4½"	4½"	4½"	4½"	4½"	4½"	
Casing type	PVC	PVC	PVC	PVC	PVC	PVC	PVC	
How joined	glued	glued	glued	glued	glued	glued	glued	
Stick-up length	N.A. ①	N.A.	N.A.	~ 10'	~ 10'	~ N.A.	~ 8'	
T.O.C.-MSL	N.A. ②	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Ground level-MSL	711.0	760.5	761.0	737.0	746.0	756.0	748.5	
Capped/Lockable	capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	
Surface pad size	none	none	none	none	none	none	none	
Depth of surface seal	none	none	none	none	none	none	none	
Annulus Fill	Cement ③	Cement	Cement	Cement	Cement	Cement	Cement	
Depth-annulus seal	~ 10'	~ 30'	~ 30'	~ 30'	~ 30'	~ 45'	~ 30'	
Depth-gravel pack	10'	30'	30'	30'	30'	45'	30'	
Length-gravel pack	90'	76'	68'	85'	70'	60'	65'	
Size-gravel pack	pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	
Depth to screen	1. 20' ③ 2. 60' 3. 95'	1. 46' 2. 86'	1. 48' 2. 78'	45'	40'	65'	55'	
Screen I.D./slot	4½" ④ N.A.	4½" N.A.	4½" N.A.	4½" N.A.	4½" N.A.	4½" N.A.	4½" N.A.	
Screen type	PVC	PVC	PVC	PVC	PVC	PVC	PVC	
Screen length	1. 5' 2. 20' 3. 5'	1. 20' 2. 20'	1. 20' 2. 20'	40'	1. 20' 2. 20'	40'	40'	
Blank length	1. 35' 2. 15'	20'	10'	None	20'	none	none	
Development Method	bailer	bailer	bailer	bailer	bailer	bailer	bailer	

① These elevations are being re-surveyed ② No bentonite used ③ Multiple screens ④ Field slotted

Comments: a. hole diameter too small b. casing should not be glued c. wells not adequately

surveyed d. no well locks e. no bentonite seals f. screens too extensive / not machined



adopted from: Groundwater Detection Monitoring Program July, 1986 W.J. Smith

Estimated Linear Velocity for Paw Paw Formation

$$\bar{v} = \frac{ki}{n}$$

where:

\bar{v} = average linear velocity ft/day

i = hydraulic gradient ft/ft (See Attachment

A-13, maximum = .01 ft/ft, minimum = .00303 ft/ft)

k = hydraulic conductivity 3.38 gpd/ft²

n = porosity (assume 20%)

$$\begin{aligned} \therefore \bar{v}_{\max} &= \frac{(3.4 \text{ gpd/ft}^2)(.01 \text{ ft/ft})}{.20} \\ &= .17 \text{ ft/day} \\ &= \underline{62 \text{ ft/year}} \end{aligned}$$

$$\begin{aligned} \bar{v}_{\min} &= \frac{(3.4 \text{ gpd/ft}^2)(.00303 \text{ ft/ft})}{.20} \\ &= .0515 \text{ ft/day} \\ &= \underline{18.8 \text{ ft/year}} \end{aligned}$$

Note: Values for hydraulic conductivity (k) were obtained from laboratory testing of soil boring samples (See page 48 of the W.J. Smith Part B Application). The average value of 1.6×10^{-4} cm/sec for the tan fine clayey sand was used for the calculations above.

TEXAS WATER COMMISSION
District No. Central Office

ATTACHMENT A-14

Horizontal Ground Water Flow Velocity
Calculations

Section B Attachments - Sampling Procedures

ATTACHMENT B-1

W. J. Smith Sampling Plan

W. J. SMITH WOOD PRESERVING CO.
MONITORING WELL SAMPLING PROTOCOL

PURPOSE: Groundwater monitoring wells are sampled and analyzed in compliance with 40 CFR 265.92 under the Resource Conservation and Recovery Act (RCRA). Under this authority, all hazardous waste management facilities are required to monitor the quality of groundwater beneath unprotected processes.

TYPES OF ANALYSIS REQUIRED:

CATEGORY I

40 CFR 265.92 (b)(1)

Arsenic
Barium
Cadmium
Chromium
Fluoride
Lead
Mercury
Nitrate (as N)
Selenium
Silver
Endrin
Lindane
Methoxychlor
Toxaphene
2, 4- D
2, 4, 5-TP Silvex
Radium
Gross Alpha
Gross Beta
Turbidity (Surface waters only)
Coliform Bacteria

CATEGORY II

40 CFR 265.92 (b) (2)

Chloride
Iron
Manganese
Phenols
Sodium
Sulfate

CATEGORY III

40 CFR 265.92 (b) (3)

ph	Four (4) replicate samples
Specific Conductance	analyzed for each sampling
Total Organic Carbon (TOC)	period from the upgradient
Total Organic Halogen (TOX)	well (Well #1).

SAMPLING

FREQUENCY:

Samples should be collected and analyzed quarterly for the first year after completion.

Following the first year, Category II analyses should be performed at least annually. Category III analyses should be performed at least semi-annually.

The groundwater surface elevation at each monitoring well must be determined each time a well is sampled.

SAMPLE COLLECTION AND STORAGE:

Category I Analyses, conducted to establish initial background water quality, shall be collected as follows:

METALS

As
Ba
Cd
Cr
Fe
Hg
Se
Ag

* 1-liter amber glass bottle
* preserved 2/ HNO₃ to <2 pH
* Cooled to 4° C

RADIUM

GROSS ALPHA

GROSS BETA

ORGANICS

Endrin
Lindane
Methoxychlor
2, 4, -D
2, 4, 5-TP Silve

*1-Liter amber glass bottle
*Unpreserved
* Cooled to 4° C
*Analyzed within 24 hours

COLIFORM BACTERIA

- * Bacteria Sampler
(Provided by Lab)
- * Cooled to 4° C
- * Analyzed within 24 hrs.

Category II analyses, conducted to provide on-going water quality monitoring, shall be collected as follows:

METALS

Fe
Mn
Na

(as with Category I Metals)

Cl
SO₄

(as with Category I Organics)

PHENOLS

- * 1-Liter Amber Glass Bottle
- * Preserved w/H₂SO₄ to <2 pH
- * Coded to 4° C
- * Analyzed within 48 hrs.

Category III analyses, conducted to provide indication of groundwater contamination, shall be collected as follows:

pH
Specific Conductance

(tested on-site or sampled
with Category I Organics)

TOC

(as with Category II-Phenols)

TOX

- *40 ml Volatile Organic
Analysis (VOA) vial
- *Cooled to 4° C

SAMPLE VOLUME REQUIREMENTS:

CATEGORY I

1 Liter Metals
1 Liter Organics
100 ml Bacteria

CATEGORY II

1 Liter Metals (unless
sampled w/Category I)

1 Liter Ionic Salts (unless
sampled w/Category I)

1 Liter phenols

CATEGORY III

1 Liter pH /Sp Cond (unless
sampled w/Category III)

1 Liter TOC (unless sampled
w/phenols)

40 ml VOA for TOX

Therefore, for combined samples in all three categories, the sample volumes and types are as outlined below:

All metals/Radioactivity	1 Liter
All Organics	1 Liter
Bacteria	100 ml BAC-T
Phenols/TOC	1 Liter
TOX	40 ml VOA

For subsequent analyses, involving only Category II and Category III tests, volumes and types are outlined below:

Metals	1 Liter
Cl, SO ₄ , pH, Sp. Cond.	1 Liter
Phenols/TOC	1 Liter
TOX	40 ml VOA

MATERIALS NEEDED:

- I. RUBBER SURGICAL GLOVES
- II. COTTON WORK GLOVES
- III. TEMPERATURE/pH METER
- IV. CONDUCTIVITY METER
- V. INDIVIDUAL TEFLON BAILERS FOR EACH SAMPLE POINT
- VI. PURGING DEVICE (PUMP WITH INDIVIDUAL HOSES FOR EACH SAMPLE POINT)
- VII. TWINE (NYLON)
- VIII. 10 GAL. WASH TUB (2)
- IX. 5 GAL. PRESSURE SPRAYER
- X. WATER LEVEL INDICATOR
- XI. SOAP (DRY) AND WATER [WASH TUB]
- XII. RINSE WATER [WASH TUB]
- XIII. DISTILLED WATER [PRESSURE SPRAYER]
- XIV. DEIONIZED WATER [FOR FINAL RINSE]
- XV. SCRUB BRUSHES (2)
- XVI. SAMPLE CONTAINERS (AS NECESSARY ACCORDING TO TEST SCHEDULE)
- XVII. ICE, 10 LBS. BAG
- XVIII. COOLER, 10 GAL. CAPACITY (MINIMUM)

- MONITOR WELL SAMPLING PROTOCOL -

PROCEDURE:

STEP I - PREPARATION OF SAMPLING EQUIPMENT

- A. DECONTAMINATION OF BAILERS AND/OR SUCTION HOSE
- B. DECONTAMINATION OF TEMP./pH METER, CONDUCTIVITY METER AND WATER LEVEL INDICATOR.
- C. PREPARATION BAILERS

*DECONTAMINATION PROCESS -

- A. One wash tub should be filled with tap water, the other with tap water and a scoop of dry soap. The pressure sprayer should be filled with distilled water. A container of deionized water should be on hand for final rinsing.
- B. Each piece of equipment should be washed with the brushes in each of the wash tub. This washing should be followed by a pressure sprayer (distilled water) rinse and a deionized water rinse.
- C. Temp/pH probe, conductivity probe, and water level indicator probe and cable should be decontaminated as all other equipment.
- D. Following decontamination Steps A and B, each piece of equipment is ready for use. Each of these steps should take place between uses at each individual well.
- E. Twine should be tied to each bailer after the decontamination process and should be discarded after sample is collected.
- F. At the end of sampling, Steps A and B should be performed again; each piece of equipment should be wrapped in plastic bags or aluminum foil after decontamination.

STEP II - SAMPLING METHODS

- A. It is important to purge the well (discharge any standing water) to obtain a true groundwater sample. Discharge of two (2) or three (3) well volumes is preferable. This will be done by bailing, air drive pump or pitcher pump.

Figure 1 is the location map for groundwater monitoring wells at the site. Table 1 identifies the well volume and the volume required to triple purge the well. Figure 2 is a graph showing pumping times at different flow rates to achieve the purge volume.

- B. Chemically inert bailers (teflon or stainless steel) must be used for organics.
- C. For each sample taken observations and/or readings should be taken for each of the following parameters:
 - 1. pH
 - 2. Temperature
 - 3. Conductivity
 - 4. Color
 - 5. Odor
 - 6. Turbidity
- D. Field blanks (rinsate blanks) of contaminant-free water and duplicate samples from one station are required for quality control.

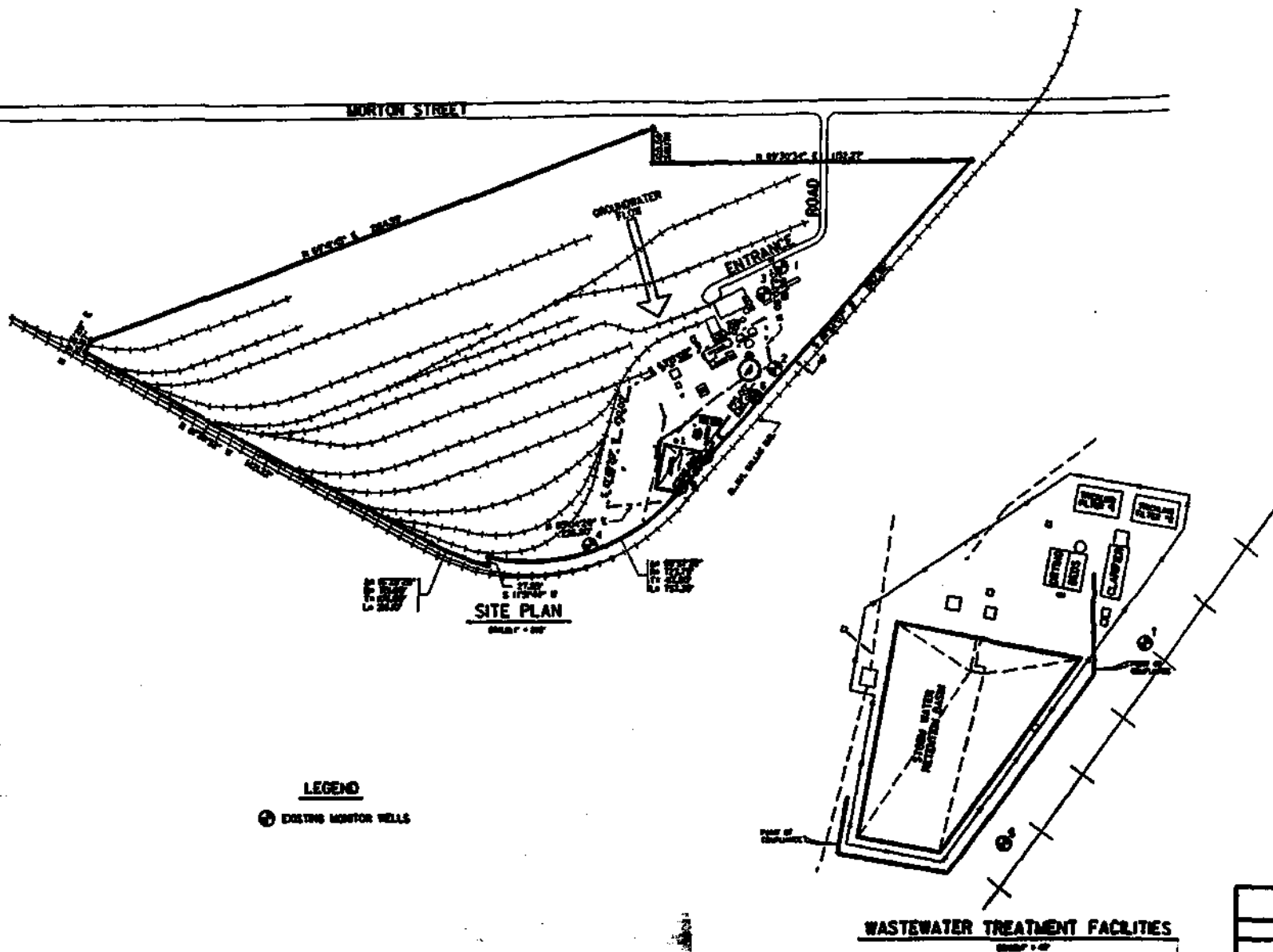


FIGURE 1

SITE PLAN

DETECTION MONITORING PROGRAM

W. J. SMITH WOOD PRESERVING CO.

DENISON, TEXAS

ALBERT H. WALFF ASSOCIATES, INC.
ENGINEERS & SCIENTISTS

DATE	BY	CHKD	SCALE	APP'D	FILE	REV.
APR 1980	WJS	WJS	1" = 40'	WJS	WJS	1

TABLE 1
GROUNDWATER MONITORING WELL DATA

Well No.	Volume of Well	Triple Purge Volume Requirement
1	65.15 Gal.	195.45 Gal.
2	63.85 Gal.	191.55 Gal.
3	69.05 Gal.	207.15 Gal.
4	55.37 Gal.	166.11 Gal.
5	65.15 Gal.	195.45 Gal.
6	68.40 Gal.	205.20 Gal.
7	61.88 Gal.	185.64 Gal.

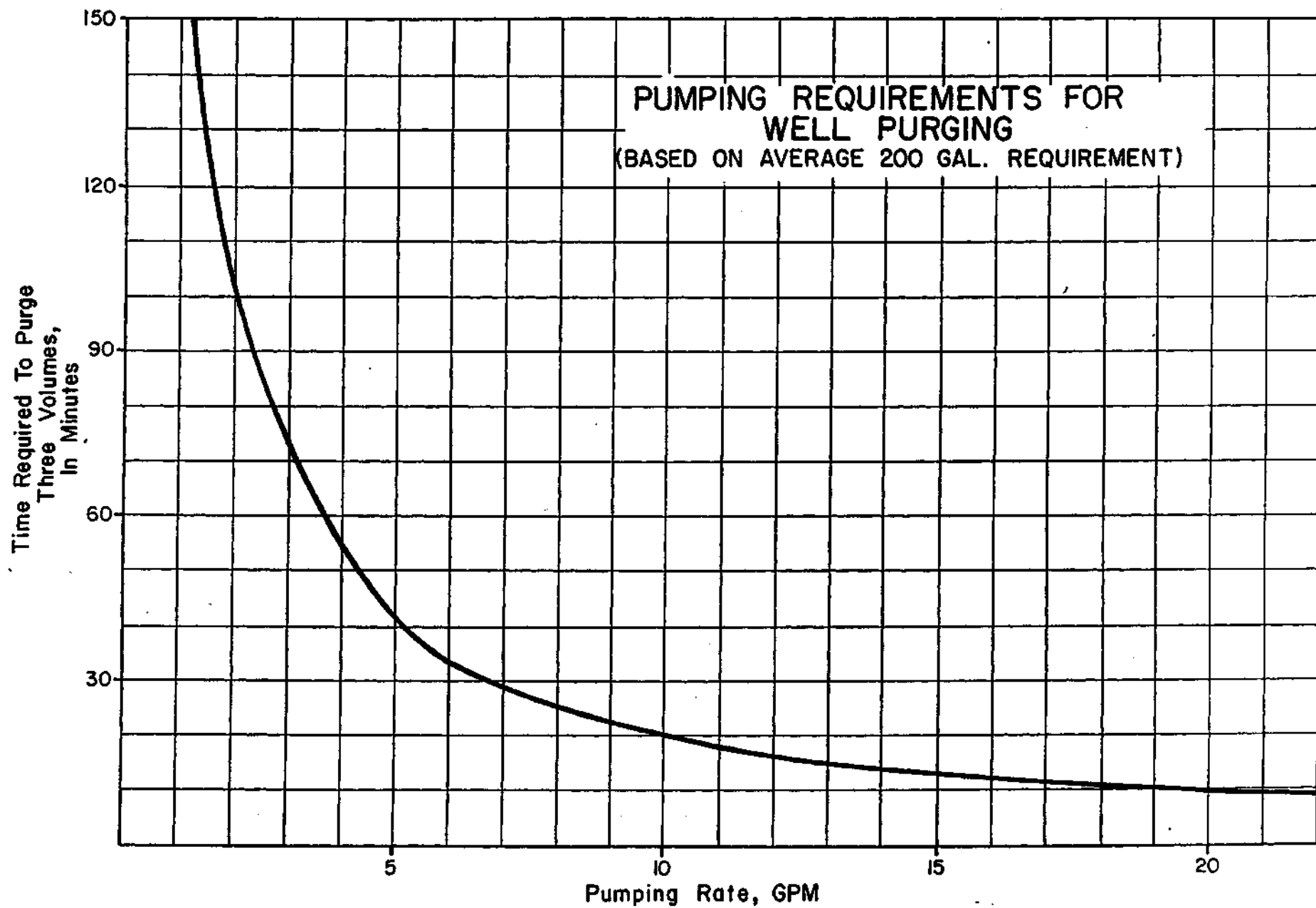


FIGURE 2

CHAIN-OF-CUSTODY FORM:

Figures 3 and 4 are example Chain-of-Custody forms which should be filled out by the sample collector at the time of sampling. These forms, or forms containing similar information, should be filled out for each series of samples, and should travel with the samples to the analytical laboratory. Each person who handles the samples should witness both that he has received and delivered the samples to the next person in the chain. This assures that the responsibility for sample safekeeping is maintained from the point of collection to the point of analysis. In the event that a sample appears to have been damaged or tampered with, the chain-of-custody can be followed to identify any point in which this may have occurred.



FIGURE 4

NDRC LAB., INC.

6350 LBJ Freeway • Suite 178 • Dallas, Texas 75240 • (214) 233-9801
LAB - 3553 Miller Park Dr. • Garland, Texas 75042

CHAIN OF CUSTODY

LAB # _____

No. _____ Type of Sample: _____

SAMPLE LOCATION: _____

DATE: _____ TIME: _____ NO. OF CONTAINERS: _____

SAMPLING PERSONNEL: NAME: _____

SIGNATURE: _____

SAMPLE LOGGED IN AT LAB: _____ LAB SAMPLE NO. _____

DATE: _____ TIME: _____ NAME: _____ SIGNATURE: _____

TEST REQUESTED: _____

Attachment B-2
TWC Sample Schedule

Texas Water Commiss Sample Schedule

Well Number	C.O.C Tag Sample No.	Analysis	Type of Container	Preservative	Time a.m.	T	pH	SC	Appearance	Water Depth	Stand Pipe
MW-1	SW 09978	GC/MS	1-liter glass	ice	10:25	29°C	7.7	①	clear	②	N.A. ③
	SW 09985	TOC	1-liter cubitainer	H ₂ SO ₄ /ice	10:25	--	--	--	--	--	--
	GW 03431	Major Ions	1-liter cubitainer	ice	--	--	--	--	--	--	--
MW-2	SW 09979	GC/MS	1-liter glass	ice	11:10	29°C	6.8	--	clear	--	--
	SW 09986	TOC	1-liter cubitainer	H ₂ SO ₄ /ice	--	--	--	--	--	--	--
	GW 03432	Major Ions	1-liter cubitainer	ice	--	--	--	--	--	--	--
MW-3	SW 09980	GC/MS	1-liter glass	ice	10:50	29°C	7.7	--	--	--	--
	SW 09987	TOC	1-liter cubitainer	H ₂ SO ₄ /ice	--	--	--	--	--	--	--
	GW 03433	Major Ions	1-liter cubitainer	ice	--	--	--	--	--	--	--
MW-5	SW 09982	GC/MS	1-liter glass	ice	11:30	29°C	7.2	--	--	--	--
	SW 09989	TOC	1-liter cubitainer	H ₂ SO ₄ /ice	--	--	--	--	--	--	--
	GW 03435	Major Ions	1-liter cubitainer	ice	--	--	--	--	--	--	--

ATTACHMENT B-2

- ① specific conductance not measured
- ② wells are being re-surveyed
- ③ not available

Attachment
B-2

Attachment B-3

TWC Field Notes

7/23/86

CME - W.J. Smith Wood Preserving Denison, TX
SW # 31002

MW-1 sampled first 10:25 a.m. (all other wells evacuated 7/22)

NOTES on sampling:

- using cent. pump for evacuating wells
- using waste hose (rubber) * need to dispose of hose
- well caps screwed on - no locking caps
- access to facility easy
- nylon bailer kept in foil/decontaminated, rope replaced
- w.l. measurements w/ bailer
- no field measurements of pH, sp cond. or temp.

MW-3 sampled 10:50

MW-2 sampled 11:10

MW-5 sampled 11:30

MW-5 is artesian, well casing \approx 8' above land surface.

- well construction:

- all wells constructed of PVC bull + spigot
- all wells cemented
- no locking caps

Records:

co. has not submitted any self-reporting forms / will start sampling/analysis plan on-site but not followed with regard to field measurements.

7-23-86

MKT site - (7) lagoons excavated; unable to obtain clean closure, cut #1 closed at capped - some slope erosion. Need to control site access. Some ponding on excavated lagoons. Runoff is dry towards Waterloo Lake. Flow during rainfall only. No monitor wells on site.

Meetings have been held w/ Sir Scott concerning drainage from site (city)

TWC - David Smith, David Buchanan, Gerardo Garcia, Caroline Abbot
W.S. - Pat Solly, Barry Adams,

TEXAS WATER COMMISSION
Comprehensive GW Monitoring Evaluation (CME) ReportINSPECTION COVER SHEET

C.O. Use Only

EPA ID No. TX D06636887909-86 LLS

Date Entry Date

NAME OF COMPANY W.S. Smith Wood Preserving Co.SITE ADDRESS P.O. Box 703 Denison, TXTel (214) 405-6161COUNTY Grayson TYPE OF INDUSTRY Wood PreservingCurrent GW Monitoring Status: Detection - W.S. Smith Plant Site(Specify for each Waste
Management Area "WMA")Detection - M&T SiteInspection Information:(TWC) Inspector(s) David R Smith, David Buchanan, Gerardo Garcia, Caroline Abbot Date(s) 7-23-86(W.S. Smith) Participants Patrick Jolly, Barry Adams, Dan TanseyType of Inspection (check) EV CME ^{us} SA ✓ Evaluation:

	S	U
A. Monitoring System	<u> </u>	<u> </u>
B. Sampling Procedures	<u> </u>	<u> </u>
C. Analysis & Results	<u> </u>	<u> ✓ </u>
D. Records & Response	<u> </u>	<u> </u>

Signed: Don R Smith
InspectorDate: 10-1-86Signed: Paul H. Lewis
ReviewerDate: 10/1/86

S= Satisfactory U= Unsatisfactory

Overall Evaluation: Compliant NonCompliant ✓

Texas Water Commission

INTEROFFICE MEMORANDUM

TO : The Files

THRU : Reports and Management Group
Hazardous and Solid Waste Division

FROM : Groundwater Enforcement Unit
Hazardous and Solid Waste Division

SUBJECT: SW # 31332
Solid Waste Registration No.

DATE: 9-25-86

Attached is an addendum report to the Comprehensive Monitoring Evaluation (CME) of W.J. Smith Wood Pres. which includes the results of analyses of monitor well samples taken during the inspection. These results were not available at the time of the CME report submittal. The attachment to this memo should be affixed to the original CME report.

Attachment

cc: TWC District 4 Office

C. Analysis and Results

1. Attachment C-1 - Tabulation of analytical methods.
Indicate directly on attachment which analyses are performed by: (*) off-site contract lab; (**) on-site operator lab; (***) field measurement.
2. Are all samples analyzed with an EPA - approved method?
unknown Yes ☐ No ☐
If not, indicate on the attachment which methods are not EPA - approved. (See Comment C-2 Attached)
3. a. Has the operator been consistent during the monitoring program in its use of methods? unknown Yes ☐ No ☐
b. Has the operator changed laboratories during the program? Yes ☐ No ☒
c. Describe any inconsistencies and how the operator has tried to resolve them: Data submitted on July 11, 1986 (2nd quarter - 1986 sampling event) showed elevated chemical oxygen demand values. The highest value reported was 91 mg/l in monitor well number MW-2. W.J. Smith attributed these results to laboratory error, and has contacted the lab to resolve the issue.
4. What is the sample analysis turn-around time (i.e., time required to receive results from laboratory)? one week
5. a. Describe the laboratory's Quality Assurance/Quality Control (QA/QC) measures: Laboratory QA/QC measures are provided in Attachment C-1. In addition to these measures, field blanks are taken during sampling, and some samples were re-tested to verify analytical results.
b. Attachment C-2 - Example of analytical results and/or QA/QC results as reported by the laboratory to the operator.

6. Do the results of the QA/QC program verify the validity and reliability of the laboratory and field-generated data?

~~Yes~~ No

If not, describe possible problems: The QA/QC program seems adequate to verify validity of laboratory results. However, W.J. Smith does not measure field parameters such as pH and specific conductance; therefore, the reliability of field-generated data is not applicable.

7. Review the operator's records of analytical results for:

- Parameters of initial year of sampling which exceed IPDWS;
- Parameters sampled as part of a Ground Water Quality Assessment Plan.

Indicate on Attachment C-3 any parameters exceeding IPDWS, or for which reported detection limits increase through time or appear high relative to other wells.

8. Overall, does the analysis program enable the reliable detection of, and for assessment purposes, the quantification of a release of hazardous constituents to ground water from the monitored WMA? Yes No X

Comments: The current analysis program is adequate. However, the monitor wells are not installed in the uppermost aquifer, and are therefore incapable of providing reliable quantification of releases.

9. Results of co-sampling events.

Attachment C-4 - Results of Operator sample analyses.

Attachment C-4 - Results of TWC sample analyses.

- a. Describe any apparent discrepancies between data sets:

In general, the data sets correlate well. However, TWC data for Sodium and TSC are lower than those reported by W.J. Smith (See Attachment C-4).

b. Compare data sets to historical results - note here any parameters which do not occur within previously observed ranges: _____

c. Do TWC results confirm the operator's results?

(See Attachment C-5 for TWC Analytical Results) Yes X No _____

If not, describe possible sources of error: _____

10. Describe the ground water quality, based on TWC results, utilizing Stiff diagrams, tri-linear plots, etc. Is ground water contamination confirmed? Yes _____ No X

Comments: See Attachment C-6 for Stiff diagrams and tri-linear plots prepared for the W.S. Smith site.

Note: because of the long screen intervals and resultant dilution of samples, the current monitor well system is not capable of yielding representative samples in the lower aquifer. Existing ground water conditions above the limestone confining layer are unknown.

45

comments: _____

C. 2. W.J. Smith does not specify test methods in the sampling plan for the facility. Upon request, W.J. Smith submitted EPA test methods and QA/QC procedures from their laboratory. However, not all test methods have been specified in this document. This document is provided as Attachment C-1.

Attachment C-1

Analytical Methods



NDRC LABORATORIES, INC.

3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

LABORATORY ANALYSIS ★ QUALITY CONTROL REPORT

Manganese	EPA Method 242.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	70 %
Sodium	EPA Method 273.1
Tom Lange	7/30/86
Duplicate	96 %
Spike Recovery	104 %
Iron	EPA Method 413.1
Tom Lange	7/30/86
Duplicate	
100 %	
Nitrate	EPA Method 253.3
Shadi Nikfarjam	7/31/86
Duplicate	100 %
Spike Recovery	109 %
Chloride	Standard Method 407A
Phenol	Standard Method 510C
Shadi Nikfarjam	7/29/86
Duplicate	100 %
Spike Recovery	102 %
pH	EPA Method 150.1
Shadi Nikfarjam	7/24/86
Calibrated 4-7-10	
Sulfate	EPA Method 375.3
Shadi Nikfarjam	7/31/86
Duplicate	100 %
Spike Recovery	96 %
Specific Conductance	EPA Method 120.1
Rick Gilbert	7/25/86
Duplicate	100 %
Spike Recovery	100 %
Arsenic	EPA Method 206.2
Tom Lange	7/30/86
Duplicate	95 %
Spike Recovery	110 %



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Barium	EPA Method 208.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	95 %
Cadmium	EPA Method 213.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	100 %
Chromium	EPA Method 218.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	100 %
Fluoride	EPA Method 240.1
Shadi Nikfarjam	7/29/86
Duplicate	90 %
Spike Recovery	105 %
Lead	EPA Method 239.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	108 %
Mercury	EPA Method 245.1
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	112 %
Selenium	EPA Method 270.2
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	92 %
Silver	EPA Method 272.2
Tom Lange	7/30/86
Duplicate	100 %
Spike Recovery	99 %
Endrin	EPA Method 8080
Steve Jones	7/29/86
Duplicate	100 %
Spike Recovery	92.2%
Lindane	EPA Method 8080
Steve Jones	7/29/86
Duplicate	100 %
Spike Recovery	92 %



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3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

Methoxychlor
Steve Jones
Duplicate
Spike Recovery

EPA Method 8080
7/29/86
100 %
90 %

Toxaphene
Steve Jones
Duplicate
Spike Recovery

EPA Method 8080
7/29/86
100 %
89 %

Chlorinated Herbicides
Steve Jones
Duplicate
Spike Recovery

EPA Method 8150
7/29/86
100 %
87 %

Silvex
Steve Jones
Duplicate
Spike Recovery

EPA Method 8150
7/29/86
100 %
84 %

Total Organic Chlorides ?
Cynthia Elmore
Duplicate
Spike Recovery

EPA Method 415.1
7/29/86
96.7 %
98.4 %

Attachment C-2

W.J. Smith Analytical Results



NDRC LABORATORIES, INC.

3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810A

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #1

WELL #1
Split w/ TWC

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	24.0 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

NDRC Laboratories, Inc.

David R. Godwin
David R. Godwin, Ph.D.
Director of Technical Services



NDRC LABORATORIES, INC.

3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810A

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #1

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
<hr/>		
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.2 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.04 mg/l
Sodium	0.01 mg/l	41.0 mg/l
Iron	0.05 mg/l	0.66
Nitrates	0.1 mg/l	14.3 mg/l
Chloride	0.1 , mg/l	25 mg/l

NDRC Laboratories, Inc.

David R. Godwin
David R. Godwin, Ph.D.

Director of Technical Services



NDRC LABORATORIES, INC.

3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810A

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #1

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	82 mg/l
pH		7.40
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		585 umhos/cm

NDRC Laboratories, Inc.

David R. Godwin
David R. Godwin, Ph.D.
Director of Technical Services



NDRC LABORATORIES, INC.

3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810B

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #2

Well #3
split w/ Twe

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	22.3 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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Director of Technical Services



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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810B

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #2

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.3 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.03 mg/l
Sodium	0.01 mg/l	43.4 mg/l
Iron	0.05 mg/l	0.25
Nitrates	0.1 mg/l	12.2 mg/l
Chloride	0.1 mg/l	10 mg/l

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810B

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #2

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	N.D.
pH		7.30
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		392 umhos/cm

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810C

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #3

Well #2
split w/twc

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	40.1 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810C

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Half & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #3

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.2 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.08 mg/l
Sodium	0.01 mg/l	27.0 mg/l
Iron	0.05 mg/l	0.23
Nitrates	0.1 mg/l	15.6 mg/l
Chloride	0.1 mg/l	8 mg/l

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810C

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #3

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	38 mg/l
pH		7.80
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		455 umhos/cm

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Director of Technical Services



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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810D

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #4

*Well #6
split w/ TWC*

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	28.2 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810D

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #4

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.2 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.12 mg/l
Sodium	0.01 mg/l	32.4 mg/l
Iron	0.05 mg/l	0.64 mg/l
Nitrates	0.1 mg/l	N.D.
Chloride	0.1 mg/l	9 mg/l

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810D

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #4

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	12 mg/l
pH		7.45
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		418 umhos/cm

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810E

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #5

*Well # 7
split w/ TWC*

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	31.1 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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Director of Technical Services



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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810E

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #5

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
----------------	-----------------	---------

Metals:

Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.1 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.07 mg/l
Sodium	0.01 mg/l	32.2 mg/l
Iron	0.05 mg/l	0.95 mg/l
Nitrates	0.1 mg/l	N.D.
Chloride	0.1 mg/l	4 mg/l

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810E

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Half & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #5

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	15 mg/l
pH		7.30
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		418 umhos/cm

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810F

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Half & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #6

Well #5

split w/ TWC

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	16.6 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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Director of Technical Services



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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810F

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Half & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #6

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.2 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.24 mg/l
Sodium	0.01 mg/l	37.9 mg/l
Iron	0.05 mg/l	0.55
Nitrates	0.1 mg/l	0.6 mg/l
Chloride	0.1 mg/l	7 mg/l

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3553 Miller Park Dr. • Garland, Texas 75042 • (214) 276-2986

DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810F

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #6

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	N.D.
pH		7.70
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		362 umhos/cm

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810G

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #7

Well #4
Split w/ TWC

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Organic Carbon	0.5 ug/l	14.7 mg/l
Pesticides:		
Endrin	0.1 ug/l	N.D.
Lindane	0.05 ug/l	N.D.
Methoxychlor	0.5 ug/l	N.D.
Toxaphene	1.0 ug/l	N.D.
Herbicides:		
2,4 D	0.5 ug/l	N.D.
2,4,5-TP Silvex	0.5 ug/l	N.D.

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Director of Technical Services



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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810G

REPORT DATE: 7-31-86

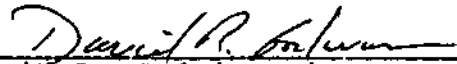
SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #7

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenols	0.1 mg/l	N.D.
Sulfate	10 mg/l	168 mg/l
pH		7.50
Gross Alpha	2 pCi/l	N.D.
Gross Beta	3 pCi/l	N.D.
Radium	1 pCi/l	N.D.
Specific Conductance		669 umhos/cm

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DATE RECEIVED: 7-24-86

REPORT NUMBER: 86-1810G

REPORT DATE: 7-31-86

SAMPLE SUBMITTED BY: Albert Halff & Associates
ADDRESS: 8616 Northwest Plaza Drive
Dallas, TX 75225
ATTENTION: Mr. Les Potter

SAMPLE DESCRIPTION: Water - Monitoring Well
IDENTIFYING MARKS: W. J. Smith Series 2 #7

ANALYSIS REPORT

TEST REQUESTED	DETECTION LIMIT	RESULTS
Metals:		
Arsenic	0.01 mg/l	N.D.
Barium	1.0 mg/l	N.D.
Cadmium	0.01 mg/l	N.D.
Chromium	0.05 mg/l	N.D.
Fluoride	0.1 mg/l	0.5 mg/l
Lead	0.1 mg/l	N.D.
Mercury	0.001 mg/l	N.D.
Selenium	0.01 mg/l	N.D.
Silver	0.01 mg/l	N.D.
Manganese	0.01 mg/l	0.68 mg/l
Sodium	0.01 mg/l	37.9 mg/l
Iron	0.05 mg/l	3.00 mg/l
Nitrates	0.1 mg/l	0.7 mg/l
Chloride	0.1 mg/l	31 mg/l

NDRC Laboratories, Inc.

David R. Godwin
David R. Godwin, Ph.D.
Director of Technical Services

Attachment C-3

Parameters Exceeding IPDWS Standards

Results from the CME conducted on July 22, 1986 yielded samples which exceeded Interim Primary Drinking Water Standards (IPDWS) for Nitrates. Current IPDWS maximum contaminant levels listed in Subpart B of 40 CFR §141.11 for Nitrates are 10mg/l. The following wells exceeded this concentration:

MW-1	TWC	17.74 mg/l
	W.J. Smith	14.3 mg/l
MW-2	TWC	3.83 mg/l
	W.J. Smith	15.6 mg/l
MW-3	TWC	0.25 mg/l
	W.J. Smith	12.2 mg/l

TWC Results

W.S. Smith Results

Well No.	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Dissolved solids (sum)	Total hardness as CaCO ₃	Spec. Cond. (umhos at 25°C)	pH ¹	pH ²	Total Organic Carbon (TOC)		
1	124	3	7	1	234	52	26	0.1	17.74	419	192	600	8.0	7.7	7.0		
2	90	4	8	1	282	21	6	0.1	0.25	285	231	443	7.9	6.8	4.0		
3	74	3	6	1	222	8	8	0.1	3.83	242	182	406	8.0	7.7	7.0		
4S	78	6	11	1	290	6	3	0.2	<0.1	264	238	418	8.0	7.2	2.0		
1			41.0			82.0	25.0					585	7.4		24.0		
2			27.0			38.0	8.0					455	7.8		40.1		
3			43.4			<10.0	10.0					392	7.3		22.3		
4			37.9			168.0	31.0					669	7.5		14.7		
5			37.9			<10.0	7.0					362	7.7		16.6		
6			32.4			12.0	9.0					418	7.45		28.2		
7			32.2			15.0	4.0					418	7.3		31.1		

*all results in milligrams per liter (mg/l)

1 lab results

2 field results

ATTACHMENT C-4

Texas Water Commission Ground Water Analysis Results

Attachment C-6

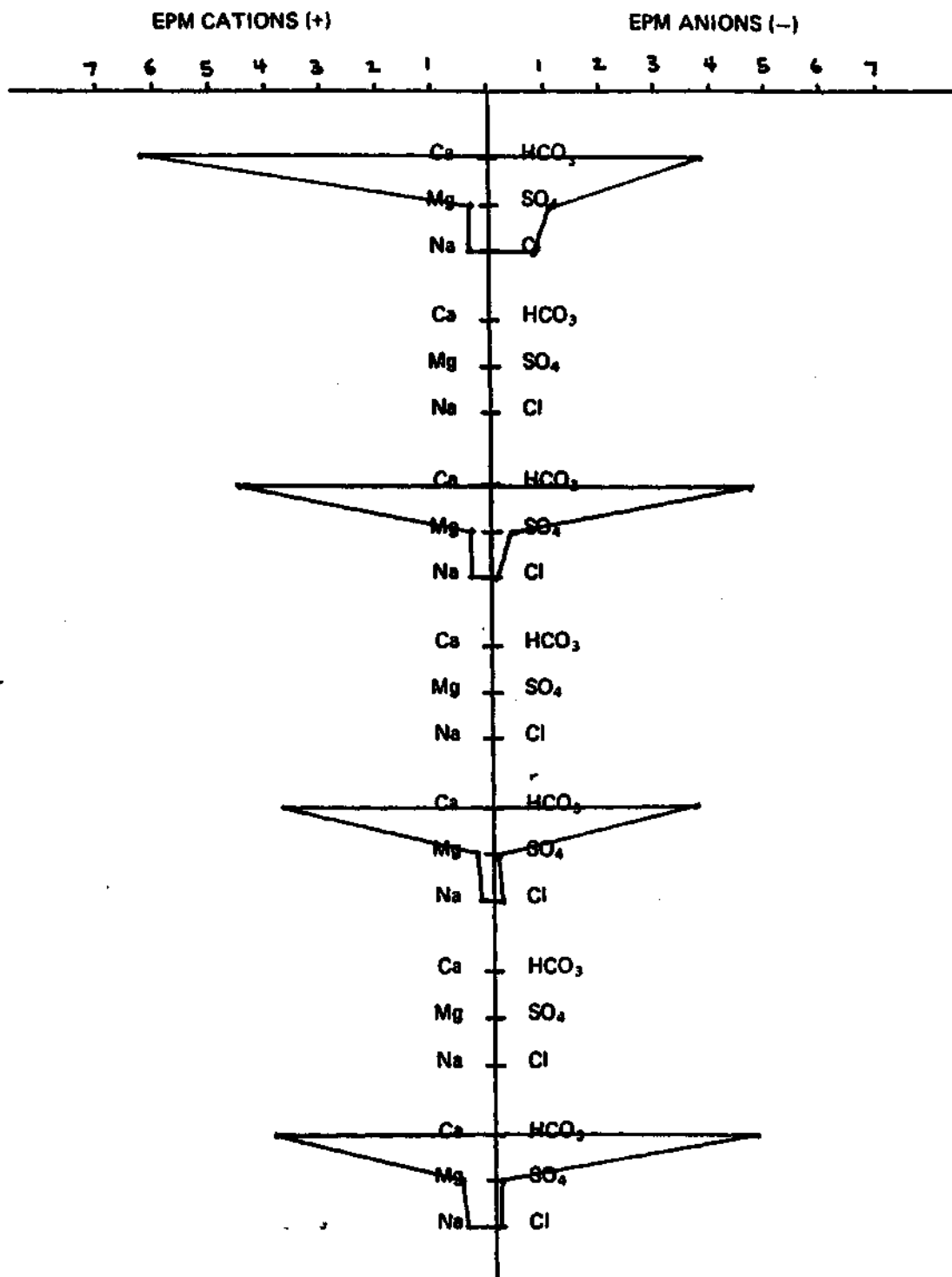
Ground Water Quality Plots

WELL #
MW-1
6.20 - 3.84
.26 - 1.08
.30 - .73

MW-2
4.80 - 4.62
.32 - .44
.35 - .17

MW-3
3.72 - 3.64
.28 - .17
.26 - .23

MW-5
3.92 - 4.76
.52 - .13
.48 - .08

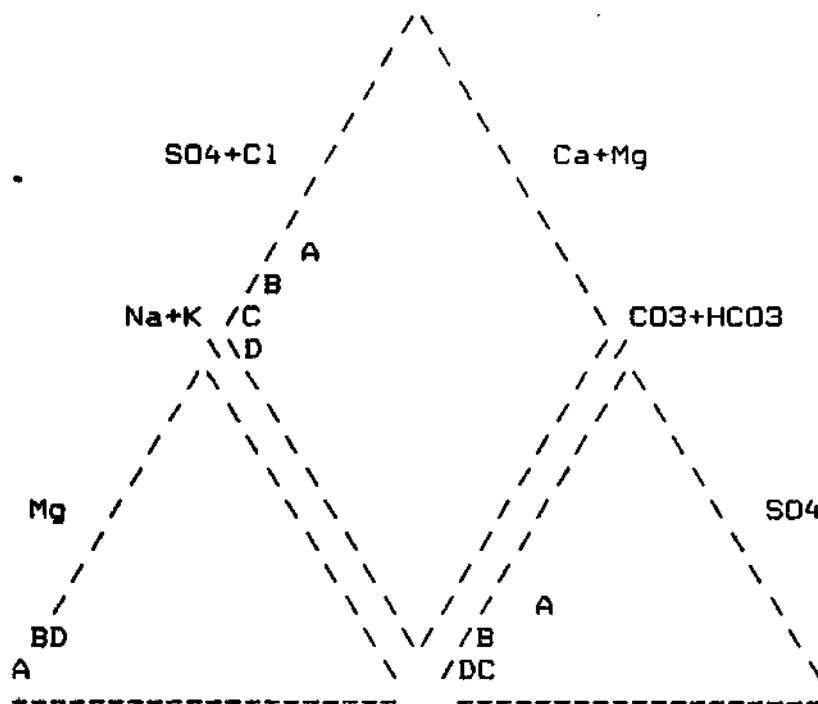


TEXAS WATER COMMISSION

ATTACHMENT C-6

Stiff Diagrams

W.J. Smith



Ca Cl
PERCENTAGE REACTING VALUES

-----MILLIGRAMS PER LITER-----
-----MILLEQUIVALENTS PER LITER-----

STATION NAME OR NUMBER	Mg	Ca	Na+K	CO3+ HCO3	SO4	Cl	SYMBOL
	3.00	124.00	8.00	234.00	52.00	26.00	A
	0.25	6.19	0.33	3.84	1.08	0.73	
	4.00	90.00	9.00	282.00	21.00	6.00	B
	0.33	4.49	0.37	4.62	0.44	0.17	
	3.00	74.00	7.00	222.00	8.00	8.00	C
	0.25	3.69	0.29	3.64	0.17	0.23	
	6.00	78.00	12.00	290.00	6.00	3.00	D
	0.49	3.89	0.50	4.75	0.12	0.08	

Attachment C-5

TWC Analytical Results

30	Code	35	Parameter Value	44	Code	49	Parameter Value	52	Code	55	Parameter Value	71
0000												
0	0	4	0	3								
0000												
0	0	3	4	0								
TOC				<i>mg/L</i>								
0	0	6	8	0								
0000												

TEXAS DEPT. OF WATER RESOURCES TDWR 0049
NO. SW 187

District CO

Org. No. 442

Work No. 9097

Lab. TOH

Site Name W.S. Smith Wood Preserving Co.

Site Location Denison, TX

Point of Collection MW-3 (see description)

County Grayson Basin Red River

Method of Collection boiler

Type Facility: ☐ Drum; ☐ Tank; ☒ Impoundment; ☐ Landfill;
☐ Wastepile; ☐ Landfarm; ☐ Other

Time Collected 10:50 (am) Date Shipped

Add SDCs

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration		Permit Number		Page No.		Date	
1	9 10	12 13	21	23 24	25 26	27 28	29
31332				3072386M			
30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value	71	
pH	7.7	TOC					

[Signature]
(Collector's Signature)

TEXAS DEPARTMENT OF WATER RESOURCES TDWR 0049
NO. SW 09987

District CO Org. No. 442 Work No. 9097 Lab. TOH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☒ Well (A);
☐ Stream (S); ☐ Other (O)

Comments MW-3

Sample Date	7/24/85
Sample Time	10:50
Analyst	<i>[Signature]</i>

Preservatives: ☐ None; ☒ Ice; ☐ H₂SO₄; ☐ HNO₃
Other

Any EPA ADHATE: ☐ EPA Toxicity Series: ☐ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value	71
00403						
00340						
TOC						
00690	7					
GDMS						

No. **GW 03431**

TEXAS DEPARTMENT OF WATER R
P.O. Box 13087, Capitol Station
Austin, Texas 78711

JRCES

Work No. 9097Org. No. 442Sample No. MW-1Owner W.J. Smith wood Preserving Address P.O. Box 703 Denison, TX Zip 75020County Grayson County Well No. MW-1Location - -

Date Drilled _____ Depth _____ Aquifer _____

Water Level _____ Sample After Pumping _____ Mins. (Hrs.) Yield _____ GPM Temperature _____ °F

Point of Collection bailer Appearance ✓ Clear 83 Turbid _____ Color _____

Use _____ Remarks _____ (Over)

Date Collected 7-23-86 Time 10:25 AM By David R SmithSend copy of completed analysis to David Smith TWC
also: Don Embanks D-4 TDWR Office No. 1116-B

TDWR-0778 (Rev. 10-24-84)

No. **GW03431**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711

Work No. 9097Org. No. 442Sample No. MW-1Point of Collection bailer / MW-1Lab Used TOH Lab No. [REDACTED] Method of Preservation iceType of Facility Creosote Preservation Date Completed _____ Analyst's Signature [Signature]

	Mg/l	EPM		Mg/l	EPM	Other Ions	Mg/l
Calcium	<u>124</u>	<u>6.20</u>	Carbonate	<u>0</u>	<u>0</u>	<input type="checkbox"/>	
Magnesium	<u>3</u>	<u>0.26</u>	Bicarbonate	<u>234</u>	<u>3.84</u>	<input type="checkbox"/>	
Sodium	<u>3</u>	<u>0.30</u>	Sulfate	<u>52</u>	<u>1.08</u>	<input type="checkbox"/>	
Total	<u>6.79</u>		Chloride	<u>26</u>	<u>0.73</u>	<input type="checkbox"/>	
Fluoride			Fluoride	<u>0.1</u>	<u>0.01</u>	<input type="checkbox"/>	
Nitrate-N			Nitrate-N	<u>17.74</u>	<u>1.27</u>	<input type="checkbox"/>	
pH			pH	<u>8.0</u>	<u>6.93</u>	<input type="checkbox"/>	
Dissolved Solids (sum)			Dissolved Solids (sum)	<u>419</u>	<u>Total</u>		
Total Alkalinity as CaCO ₃			Total Alkalinity as CaCO ₃		<u>192</u>	<u>3.84</u>	
Specific Conductance (Micromhos/cm)			Specific Conductance (Micromhos/cm)		<u>600</u>		

[] Items will be analyzed if checked, total Iron requires separate sample.

TDWR-0778 (Rev. 10-24-84)

No. **GW 03432**

TEXAS DEPARTMENT OF WATER RES.

P.O. Box 13087, Capitol Station
Austin, Texas 78711

CES

Work No. 9097
Org. No. 442
Sample No. MW-2Owner W.J. Smith Wood Preserving Address P.O. Box 703 Denison, TX Zip 75020County Grayson Well No. MW-2

Location _____

Date Drilled _____ Depth _____ Aquifer _____

Water Level _____ Sample After Pumping _____ Mins. (Hrs.) Yield _____ GPM Temperature 29°CPoint of Collection bailer Appearance _____ Clear ☒ Turbid _____ Color _____

Use _____ Remarks _____ (Over)

Date Collected 7/23/86 Time 11:10 AM By David R SmithSend copy of completed analysis to David Smith TWC
also: Don Eubanks O-4 TWR Office No. 1116-B

TDWR-0778 (Rev. 10-24-84)

No. **GW03432**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711Work No. 9097
Org. No. 442
Sample No. MW-2Point of Collection bailer / MW-2Lab Used TDH Lab No. _____ Method of Preservation iceType of Facility Cross-section preservation Date Completed AUG 29 '86 Analyst's Signature ML

	Mg/l	EPM		Mg/l	EPM	Other Ions	Mg/l
Calcium	<u>90</u>	<u>4.50</u>	Carbonate	<u>0</u>	<u>0</u>	<input type="checkbox"/>	
Magnesium	<u>4</u>	<u>.32</u>	Bicarbonate	<u>282</u>	<u>4.62</u>	<input type="checkbox"/>	
Sodium	<u>8</u>	<u>.35</u>	Sulfate	<u>21</u>	<u>0.44</u>	<input type="checkbox"/>	
Total	<u>5.19</u>		Chloride	<u>16</u>	<u>0.17</u>	<input type="checkbox"/>	
Potassium	<u>1</u>	<u>.03</u>	Fluoride	<u>0.1</u>	<u>0.01</u>	<input type="checkbox"/>	
Iron			Nitrate-N	<u>0.25</u>	<u>0.02</u>	<input type="checkbox"/>	
			pH <u>7.9</u>	Total	<u>5.25</u>	<input type="checkbox"/>	
			Dissolved Solids (sum)	<u>285</u>		<input type="checkbox"/>	

Remarks _____

Total Alkalinity as CaCO₃Total Hardness as CaCO₃

Specific Conductance (Micromhos/CM)

Dissolved Solids (sum)

☐ Items will be analyzed if checked, total Iron requires separate sample.

TDWR 0778 (Rev. 10-24-84)

No. **GW 03433**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711

JUL 25 1986

Work No. 9097
Org. No. 442
Sample No. MW-3Owner W.J. Smith Wood Preserving Address P.O. Box 703 Denison, TX Zip 75020County Grayson Well No. MW-3

Location _____

Date Drilled _____ Depth _____ Aquifer _____

Water Level _____ Sample After Pumping _____ Mins. (Hrs.) Yield _____ GPM Temperature _____ °F

Point of Collection bailer Appearance _____ Clear _____ Turbid _____ Color _____

Use _____ Remarks _____ (Over)

Date Collected 7/23/86 Time 10:50 a.m. By David R SmithSend copy of completed analysis to David R Smith TWC
TDWR Office No. 1116-B

TDWR-0778 (Rev. 10-24-84)

No. **GW 03433**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711

JUL 24 1986

Work No. 9097
Org. No. 442
Sample No. MW-3Point of Collection bailer/MW-3Lab Used TDH Lab No. _____ Method of Preservation iceType of Facility creosote preservation Date Completed 7/29/86 Analyst's Signature ML

	Mg/l	EPM		Mg/l	EPM	Other Ions	Mg/l
<u>Calcium</u>	<u>74</u>	<u>3.72</u>	<u>Carbonate</u>	<u>0</u>	<u>0</u>	<input type="checkbox"/>	
<u>Magnesium</u>	<u>3</u>	<u>0.28</u>	<u>Bicarbonate</u>	<u>222</u>	<u>3.64</u>	<input type="checkbox"/>	
<u>Sodium</u>	<u>6</u>	<u>0.26</u>	<u>Sulfate</u>	<u>8</u>	<u>0.17</u>	<input type="checkbox"/>	
		<u>4.29</u>	<u>Chloride</u>	<u>8</u>	<u>0.23</u>	<input type="checkbox"/>	
			<u>Fluoride</u>	<u>0.1</u>	<u>0.010</u>	<input type="checkbox"/>	
<u>Potassium</u>	<u>1</u>	<u>0.03</u>	<u>Nitrate-N</u>	<u>3.83</u>	<u>0.27</u>	<input type="checkbox"/>	
<u>Boron</u>			<u>pH</u>	<u>8.0</u>	<u>4.31</u>	<input type="checkbox"/>	
<u>Iron</u>			<u>Total</u>				
			<u>Dissolved Solids (sum)</u>	<u>242</u>			
			<u>Total Alkalinity as CaCO₃</u>				
			<u>Total Hardness as CaCO₃</u>				
			<u>Specific Conductance (Micromhos/cm)</u>				
			<u>Dissolved Solids (Micromhos/cm)</u>				

Remarks _____

☐ Items will be analyzed if checked, total Iron requires separate sample.

TDWR 0778 (Rev. 10-24-84)

No. **GW 03435**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711Work No. 9097
Org. No. 442
Sample No. MW-5Owner W. J. Smith Wood Preserving Address P.O. Box 703, Denison, TX Zip 75020County Denison Well No. MW-5Location --Date Drilled Depth Aquifer Water Level Sample After Pumping Mins. (Hrs.) Yield GPM Temperature 29°C XPoint of Collection baier Appearance ✓ Clear Turbid Color Use Remarks (Over)Date Collected 7/23/86 Time 11:30 AM By David R SmithSend copy of completed analysis to David Smith TWC TDWR Office No. 1116-B

also: Don Eubanks D-4

TDWR-0778 (Rev. 10-24-84)

No. **GW03435**

TEXAS DEPARTMENT OF WATER RESOURCES

P.O. Box 13087, Capitol Station
Austin, Texas 78711Work No. 9097
Org. No. 442
Sample No. MW-5Point of Collection baier/MW-5Lab Used TDH Lab No. [REDACTED] Method of Preservation iceType of Facility Crossite preservation Date Completed Analyst's Signature [Signature]

	Mg/l	EPM		Mg/l	EPM	Other Ions	Mg/l
19x			7/29/86				
Silica			Carbonate	<u>0</u>	<u>0</u>	<input type="checkbox"/>	
Calcium	<u>78</u>	<u>3.92</u>	Bicarbonate	<u>290</u>	<u>4.76</u>	<input type="checkbox"/>	
Magnesium	<u>6</u>	<u>0.52</u>	Sulfate	<u>6</u>	<u>0.13</u>	<input type="checkbox"/>	
Sodium	<u>11</u>	<u>0.48</u>	Chloride	<u>3</u>	<u>0.08</u>	<input type="checkbox"/>	
	Total	<u>4.94</u>	Fluoride	<u>0.2</u>	<u>0.01</u>	<input type="checkbox"/>	
<input type="checkbox"/> Potassium	<u>1</u>	<u>0.03</u>	Nitrate-N	<u>20.01</u>	<u>0</u>	<input type="checkbox"/>	
<input type="checkbox"/> Barium			pH	<u>8.0</u>	Total <u>4.98</u>	<input type="checkbox"/>	
<input type="checkbox"/> Chloride			Dissolved Solids (sum)	<u>2104</u>		<input type="checkbox"/>	
Remarks			Phosphates as PO_4^{3-}				
			Total Alkalinity as CaCO_3		<u>238</u>	<u>4.76</u>	
			Total Hardness as CaCO_3				
			Specific Conductance (Micromhos/cm)		<u>418</u>		
			Diluted Conductance (Micromhos/cm)				

☐ Iron will be analyzed if checked, total Iron requires separate sample.

TDWR 0778 (Rev. 10-24-84)

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EPA PRIORITY POLLUTANTS

ANALYST: C. H. B. 11

DATE: 8/21/86

TOM SAMPLE NUMBER: JH6-1548

TWC SAMPLE NUMBER: SW 09978

* DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WELL

SAMPLE CONDITION:

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<10	4-CHLORO-3-CRESOL	<10	4-NITROPHENOL	<20
CHLOROPHENOL	+	2,4,6-TRICHLOROPHENOL	+	2,6-DINITRO-2-CRESOL	+
2-NITROPHENOL	+	2,4-DINITROPHENOL	+	PENTACHLOROPHENOL	+
2,4-DICHLOROPHENOL	+	2,4-DINITROPHENOL	<20		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5.0	ACENAPHTHYLENE	<5.0	FLUORANTHENE	<5.0
bis-(2-CHLOROETHYL) ETHER	+	DIMETHYL PHTHALATE	+	PYRENE	+
1,3-DICHLOROBENZENE	+	2,6-DINITROTOLUENE	+	BENZIDINE	+
1,4-DICHLOROBENZENE	+	ACENAPHTHENE	+	DIETHYLBENZYL PHTHALATE	+
1,2-DICHLOROBENZENE	+	2,4-DINITROTOLUENE	+	BENZ(a)ANTHRACENE	+
bis-(2-CHLOROISOPROPYL) ETHER	+	FLUORENE	+	CHRYSENE	+
HEXACHLOROETHANE	+	4-CHLOROPHENYL PHENYL ETHER	+	3,3'-DICHLOROBENZIDINE	+
N-NITROSO-DI-n-PROPYLAMINE	+	DIETHYL PHTHALATE	+	bis-(2-ETHYLHEXYL)PHTHALATE	+
NITROBENZENE	+	DIPHENYLAMINE	+	DI-n-OCYL PHTHALATE	+
ISOPHTHALENE	+	N-NITROSO-DIPHENYLAMINE	5.2	BENZOL(j)FLUORANTHENE	+
bis-(2-CHLOROETHOXY)METHANE	+	1,2-DIPHENYLHYDRAZINE	<5.0	BENZOL(k)FLUORANTHENE	+
1,2,4-TRICHLOROBENZENE	+	4-BROMOPHENYL PHENYL ETHER	+	BENZOL(l)PYRENE	+
NAPHTHALENE	+	HEXACHLOROBENZENE	+	INDENO(1,2,3-cd)PYRENE	+
HEXACHLOROCYCLOPENTADIENE	+	PHENANTHRENE	+	DIBENZ(a,h)ANTHRACENE	+
2-CHLORONAPHTHALENE	+	ANTHRACENE	+	BENZOL(g,h,i)PERYLENE	+
		DI-n-BUTYL PHTHALATE	+		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<10	ALDRIN	<10	Beta-ENDOSULFAN	<20
gamma-BHC	+	4,4'-DDE	+	ENDOSULFAN SULFATE	+
beta-BHC	+	DIELDRIN	+	ENDRIN	+
delta-BHC	+	4,4'-DDD	+	alpha-ENDOSULFAN	+
HEPTACHLOR	+	4,4'-DDT	+	HEPTACHLOR EPOXIDE	+
ENDRIN ALCOHOL	+				

VOLATILE ORGANICS IN (CHECK ONE) () MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROETHANE	---	1,2-DICHLOROETHANE	---	1,1,2-TRICHLOROETHANE	---
BROMOETHANE	---	CARBON TETRACHLORIDE	---	2-CHLOROETHYLPHENYL ETHER	---
VINYL CHLORIDE	---	BROMODICHLOROETHANE	---	TRICHLOROETHYLENE	---
CHLOROETHANE	---	BENZENE	---	BROMOFORM	---
TRICHLOROFLUOROETHANE	---	DIBROMOCHLOROETHANE	---	TOLUENE	---
CHLOROFORM	---	1,1,1-TRICHLOROETHANE	---	ETHYLBENZENE	---
METHYLENE CHLORIDE	---	1,2-DICHLOROPROPANE	---	1,1,2,2-TETRACHLOROETHANE	---
1,1-DICHLOROETHYLENE	---	trans-1,3-DICHLOROPROPYLENE	---	TETRACHLOROETHYLENE	---
1,1-DICHLOROETHANE	---	cis-1,3-DICHLOROPROPYLENE	---	CHLOROPHENOL	---
trans-1,2 DICHLOROETHYLENE	---				

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANTS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTIFICATION IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE
COMPOUND
IDENTIFICATIONAPPROXIMATE CONCENTRATION
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
() MILLIGRAMS/KILOGRAM

BENZOTHIADIAZOLE 30

N,N-DICYCLOHEXYL UREA 5.3

NO HYDROCARBONS FOUND <5.0

COMMENTS AND OTHER REQUESTED ANALYSES:

SIGNATURE

DATE

Richard A. Albert

8/21/86

GC/MS ANALYSIS REPORT
EPA PRIORITY POLLUTANTS

ST: C-4512H

DATE: 8/21/86

TDH SAMPLE NUMBER: GH6-1549
TWC SAMPLE NUMBER: SW 09979

* DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WELL

SAMPLE CONDITION: INTACT

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<10	4-CHLORO-3-CRESOL	<10	4-NITROPHENOL	<20
CHLOROPHENOL	+	2,4,6-TRICHLOROPHENOL	+	2,6-DINITRO-2-CRESOL	+
2-NITROPHENOL	+	2,4-DIMETHYLPHENOL	+	PENTACHLOROPHENOL	+
2,4-DICHLOROPHENOL	+	2,4-DINITROPHENOL	<20		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5.0	ACENAPHTHYLENE	<5.0	FLUORANTHENE	0.86
bis-(2-CHLOROETHYL) ETHER	+	DIMETHYL PHTHALATE	+	PYRENE	<5.0
1,3-DICHLOROBENZENE	+	2,6-DINITROTOLUENE	+	BENZIDINE	+
1,4-DICHLOROBENZENE	+	ACENAPHTHENE	+	DITYLBENZYL PHTHALATE	+
1,2-DICHLOROBENZENE	+	2,4-DINITROTOLUENE	+	BENZ(a)ANTHRACENE	+
bis-(2-CHLOROISOPROPYL) ETHER	+	FLUORENE	+	CHRYSENE	+
HEXACHLOROETHANE	+	4-CHLOROPHENYL PHENYL ETHER	+	3,3'-DICHLOROBENZIDINE	+
N-NITROSO-DI-N-PROPYLAMINE	+	DIEHTYL PHTHALATE	+	bis-(2-ETHYLHEXYL)PHTHALATE	+
NITROBENZENE	+	DIPHENYLAMINE	+	DI-N-OCTYL PHTHALATE	+
ISOPHTHENE	+	N-NITROSDIPHENYLAMINE	+	BENZO(j)FLUORANTHENE	+
bis-(2-CHLOROETHOXY)METHANE	+	1,2-DIPHENYLHYDRAZINE	+	BENZO(k)FLUORANTHENE	+
1,2,4-TRICHLOROBENZENE	+	4-BROMOPHENYL PHENYL ETHER	+	BENZO(a)PYRENE	+
NAPHTHALENE	+	HEXACHLOROBENZENE	+	INDENO(1,2,3-cd)PYRENE	+
HEXACHLOROBUTADIENE	+	PHENANTHRENE	+	DIBENZO(a,h)ANTHRACENE	+
HEXACHLOROCYCLOPENTADIENE	+	ANTHRACENE	+	BENZO(ghi)PERYLENE	+
2-CHLOROPHTHALENE	+	DI-n-BUTYL PHTHALATE	+		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<10	ALDRIN	<10	BETA-ENDOSULFAN	<20
gamma-BHC	+	4,4'-DDE	+	ENDOSULFAN SULFATE	+
BETA-BHC	+	DELTAMETH	+	ENDRIN	+
delta-BHC	+	4,4'-DDD	+	alpha-ENDOSULFAN	+
HEPTACHLOR	+	4,4'-DDT	+	HEPTACHLOR EPOXIDE	+
ENDRIN ALDEHYDE	+				

VOLATILE ORGANICS IN (CHECK ONE) () MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROETHANE	---	1,2-DICHLOROETHANE	---	1,1,2-TRICHLOROETHANE	---
BROMOETHANE	---	CARBON TETRACHLORIDE	---	2-CHLOROETHYL VINYL ETHER	---
VINYL CHLORIDE	---	BROMODICHLOROETHANE	---	TRICHLOROETHYLENE	---
CHLOROETHANE	---	BENZENE	---	BROMOFORM	---
TRICHLOROFLUOROETHANE	---	DIBROMOCHLOROETHANE	---	TOLUENE	---
CHLOROFORM	---	1,1,1-TRICHLOROETHANE	---	ETHYLBENZENE	---
METHYLENE CHLORIDE	---	1,2-DICHLOROPROPANE	---	1,1,2,2-TETRACHLOROETHANE	---
1,1-DICHLOROETHYLENE	---	trans-1,3-DICHLOROPROPYLENE	---	TETRACHLOROETHYLENE	---
1,1-DICHLOROETHANE	---	cis-1,3-DICHLOROPROPYLENE	---	CHLOROACETONE	---
trans-1,2-DICHLOROETHYLENE	---				

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANT PEAKS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION AS DIB-ANTHRACENE IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE
COMPOUND
IDENTIFICATION

APPROXIMATE CONCENTRATION
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
() MILLIGRAMS/KILOGRAM

BENZOTHIADIAZOLE 7.3
NO HYDROCARBONS FOUND <5.0

COMMENTS AND OTHER REQUESTED ANALYSES:

SIGNATURE

DATE

Robert A. Allen

8/21/86

NO. SW 0998
 Site Name W.J. Smith Wood Preserving Co.
 Site Location Denison, TX
 County Grayson Basin Red River
 Method of Collection bailer

Point of Collection MW-3
 Type facility: ☐ Drum; ☐ Tank; ☒ Impoundment; ☐ Landfill
☐ Waste pile; ☐ Landfarm; ☐ Other
 Time Collected 10:50 (am) Date Shipped _____
 Add. CCC #s _____
 ODOR: ☐ Yes; ☒ No; Describe _____

S.W. Registration				Permit Number				Para No.				Date			
1	9	10	18	19	21	22	23	24	25	26	27	28	29	30	
31332				B0723				P16M							
30 Code				35 Parameter Value				44 Code				49 Parameter Value			
GC/MS															

[Signature]
 (Collector's Signature)

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849
 NO. SW 09980
 District CO Org. No. 442 Work No. 9097 Lab TDH
 Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☒ Well (M);
☐ Stream (S); ☐ Other (O)
 Comments MW-3

Lab Only	Date	REC'D JUL 24 '86
	Date	ANAL'D 22 '86
Analyst sign: <i>[Signature]</i>		

Preservation: ☐ None; ☒ Ice; ☐ H₂SO₄; ☐ HNO₃
 Other _____

Auxiliary Tags _____
☐ LEACHATE: _____ EP Toxicity Series; _____ TDWR

30 Code				35 Parameter Value				44 Code				49 Parameter Value				58 Code				63 Parameter Value				71			
00403																											
00340																											
00680																											
GC/MS Hydrocarbons																											

ON-PRIORITY POLLUTANT PEAKS
 ARY. QUANTITATION AS DIO-ANTHRAENE
 D AS APPROXIMATE.

APPROXIMATE CONCENTRATIONS
 AS D-10 ANTHRACENE
☒ MICROGRAMS/LITER
☐ MILLIGRAMS/KILOGRAM

18.
 3.7

EPA PRIORITY POLLUTANTS

DATE: 8/29/86

TOW SAMPLE NUMBER: E46-1550
TWC SAMPLE NUMBER: SW 09980

* DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WELL

SAMPLE CONDITION: INTACT

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<10	4-CHLORO-3-CRESOL	<10	4-NITROPHENOL	<20
CHLOROPHENOL	↓	2,4,6-TRICHLOROPHENOL	↓	2,6-DINITRO-2-CRESOL	↓
2-NITROPHENOL	↓	2,4-DINITROPHENOL	↓	PENTACHLOROPHENOL	↓
2,4-DICHLOROPHENOL	↓	2,4-DINITROPHENOL	<20		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<50	ACENAPHTHYLENE	<50	FLUORANTHENE	<50
bis-(2-CHLOROETHYL) ETHER	↓	DIMETHYL PHTHALATE	↓	PYRENE	↓
1,3-DICHLOROBENZENE	↓	2,6-DINITROTOLUENE	↓	BENZIDINE	↓
1,4-DICHLOROBENZENE	↓	ACENAPHTHENE	↓	DUTYL BENZYL PHTHALATE	↓
1,2-DICHLOROBENZENE	↓	2,4-DINITROTOLUENE	↓	BENZ(a)ANTHRACENE	↓
bis-(2-CHLOROISOPROPYL) ETHER	↓	FLUORENE	↓	CHRYSENE	↓
HEXACHLOROETHANE	↓	4-CHLOROPHENYL PHENYL ETHER	↓	3,3'-DICHLOROBENZIDINE	↓
N-NITROSO-DI-N-PROPYLAMINE	↓	DIETHYL PHTHALATE	↓	bis-(2-ETHYLHEXYL) PHTHALATE	↓
NITROBENZENE	↓	DIPHENYLAMINE	↓	DI-n-OCTYL PHTHALATE	↓
ISOPHORENE	↓	N-NITROSO-3-PHENYLAMINE	3.1	BENZO(j)FLUORANTHENE	↓
bis-(2-CHLOROETHOXY)METHANE	↓	1,2-DIPHENYLHYDRAZINE	<50	BENZO(k)FLUORANTHENE	↓
1,2,4-TRICHLOROBENZENE	↓	4-BROMOPHENYL PHENYL ETHER	↓	BENZO(a)PYRENE	↓
NAPHTHALENE	↓	HEXACHLOROBENZENE	↓	INDENO(1,2,3-cd)PYRENE	↓
HEXACHLOROBUTADIENE	↓	PHENANTHRENE	↓	DIBENZO(a,h)ANTHRACENE	↓
HEXACHLORO-CYCLOPENTADIENE	↓	ANTHRACENE	↓	BENZO(ghi)PERYLENE	↓
2-CHLORONAPHTHALENE	↓	DI-n-BOYL PHTHALATE	↓		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<10	ALDRIN	<10	beta-ENDOSULFAN	<20
gamma-BHC	↓	4,4'-DDE	↓	ENDOSULFAN SULFATE	↓
delta-BHC	↓	DIELDRIN	↓	ENDRIN	↓
delta-BHC	↓	4,4'-DDD	↓	alpha-ENDOSULFAN	↓
HEPTACHLOR	↓	4,4'-DDT	↓	HEPTACHLOR EPOXIDE	↓
ENDRIN ALCOHOL	↓				

VOLATILE ORGANICS IN (CHECK ONE) () MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM:

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE	---	1,2-DICHLOROETHANE	---	1,1,2-TRICHLOROETHANE	---
BROMOMETHANE	---	CARBON TETRACHLORIDE	---	2-CHLOROETHYL VINYL ETHER	---
VINYL CHLORIDE	---	BROMODICHLOROETHANE	---	TRICHLOROETHYLENE	---
CHLOROETHANE	---	BENZENE	---	BROMOFORM	---
TRICHLOROFLUOROMETHANE	---	DIBROMOCHLOROETHANE	---	TOLUENE	---
CHLOROFORM	---	1,1,1-TRICHLOROETHANE	---	ETHYL BENZENE	---
METHYLENE CHLORIDE	---	1,2-DICHLOROPROPANE	---	1,1,2,2-TETRACHLOROETHANE	---
1,1-DICHLOROETHYLENE	---	trans-1,3-DICHLOROPROPYLENE	---	TETRACHLOROETHYLENE	---
1,1-DICHLOROETHANE	---	cis-1,3-DICHLOROPROPYLENE	---	CHLOROBENZENE	---
trans-1,2-DICHLOROETHYLENE	---				

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANTS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

MS
D-ANTHRACENEAPPROXIMATE CONCENTRATIONS:
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
() MILLIGRAMS/KILOGRAMTENTATIVE
COMPOUND
IDENTIFICATION

... BENZOTHIADIAZOLE ... 18.

... N,N'-DIETHYL-2-ETHYLUREA ... 3.7

COMMENTS AND OTHER REQUESTED ANALYSES:

NO HYDROCARBONS DETECTED < 5 µg/l

SIGNATURE

DATE

Richard A. Albert 8/21/86

WORK 140

Point of Collection MW-5

Basin Red River

Method of Collection triler

Type facility: ☐ Drum; ☐ Tank; ☒ Impoundment; ☐ Landfill☐ Waste pile: ☐ Landfarm: ☐ Other: _____

Time Collected 11.30 (am, pm) Date Shipped 7/24/56

Add. COC =s

ODOR: ☐ Yes: ☒ No: Describe

(Collector's Signature)

District CO Org. No. 442 Work No. 9097 Lab. TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☒ Well (M);
☐ Stream (S); ☐ Other (O) _____

Comments MW-5

(continued on back)

Lab Only	Date	JUL 24 '86	FBI LABORATORY
	Time	JUL 22 '86	
Analyst sign:		brr	

Preservation: ☐ None; ☒ Ice; ☐ H₂SO₄; ☐ HNO₃
Other _____

Auxiliary Tags

☐ LEACHATE: EP Toxicity Series: TDWR[illegible]

N-PRIORITY POLLUTANT PEAKS
BY QUANTITATION AS DIO-ANTHRA
AS APPROXIMATE.

APPROXIMATE CONCENTRATION:
AC 2-10 ANTHRACENE
(✓) MICROGRAMS/LITER
() MILLIGRAMS/KILOGRAM

...

GC/MS ANALYSIS REPORT
EPA PRIORITY POLLUTANTS

C. 173217

DATE: 8/21/86

TDH SAMPLE NUMBER: EH6-1551

TWC SAMPLE NUMBER: SW09982

SAMPLE TYPE: WELL

SAMPLE CONDITION: INTACT

DETECTION LIMITS ARE APPROXIMATE

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<10	4-CHLORO-3-CRESOL	<10	4-NITROPHENOL	<20
CHLOROPHENOL	---	2,4,6-TRICHLOROPHENOL	---	2,6-DINITRO-2-CRESOL	---
2-NITROPHENOL	---	2,4-DIMETHYLPHENOL	---	PENTACHLOROPHENOL	---
2,4-DICHLOROPHENOL	---	2,4-DINITROPHENOL	<20		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5.0	ACENAPHTHYLENE	<5.0	FLUORANTHENE	<5.0
bis-(2-CHLOROETHYL) ETHER	---	BIPHENYL PHTHALATE	---	PYRENE	---
1,3-DICHLOROBENZENE	---	2,6-DINITROTOLUENE	---	BENZIDINE	---
1,4-DICHLOROBENZENE	---	ACENAPHTHENE	---	DUTYL BENZYL PHTHALATE	---
1,2-DICHLOROBENZENE	---	2,4-DINITROTOLUENE	---	BENZ(a)ANTHRACENE	---
bis-(2-CHLOROISOPROPYL) ETHER	---	FLUORENE	---	CHRYSENE	---
HEXACHLORODITHANE	---	4-CHLOROPHENYL PHENYL ETHER	---	3,3'-DICHLOROBENZIDINE	---
N-NITROSO-DI-n-PROPYLAMINE	---	BIPHENYL PHTHALATE	---	bis-(2-ETHYLHEXYL) PHTHALATE	---
NITROBENZENE	---	DIPHENYLAMINE	---	DI-n-OCTYL PHTHALATE	---
ISOPHORBONE	---	N-NITROSO-DIPHENYLAMINE	---	BENZ(b)FLUORANTHENE	---
bis-(2-CHLOROETHOXY)METHANE	---	1,2-DIPHENYLHYDRAZINE	---	BENZ(c)FLUORANTHENE	---
1,2,4-TRICHLOROBENZENE	---	4-BROMOPHENYL PHENYL ETHER	---	BENZ(d)PYRENE	---
NAPHTHALENE	---	HEXACHLOROBENZENE	---	INDEN(1,2,3-cd)PYRENE	---
HEXACHLOROCYCLOPENTADIENE	---	PHENANTHRENE	---	DIBENZ(a,h)ANTHRACENE	---
2-CHLORONAPHTHALENE	---	ANTHRACENE	---	BENZ(ghi)PERYLENE	---
		DI-n-BUTYL PHTHALATE	---		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<10	ALDRIN	<10	BETA-ENDOSULFAN	<20
gamma-BHC	---	4,4'-DDE	---	ENDOSULFAN SULFATE	---
Beta-BHC	---	DIELDRIN	---	ENDRIN	---
delta-BHC	---	4,4'-DDD	---	alpha-ENDOSULFAN	---
HEPTACHLOR	---	4,4'-DDT	---	HEPTACHLOR EPOXIDE	---
ENDRIN ALBENDIDE	---				

VOLATILE ORGANICS IN (CHECK ONE) () MICROGRAMS/LITER () MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE	---	1,2-DICHLOROETHANE	---	1,1,2-TRICHLOROETHANE	---
BROMOMETHANE	---	CARBON TETRACHLORIDE	---	2-CHLOROETHYL VINYL ETHER	---
VINYL CHLORIDE	---	MONOCHLOROMETHANE	---	TRICHLOROETHYLENE	---
CHLOROETHANE	---	BENZENE	---	BROMOFORM	---
TRICHLOROFLUOROMETHANE	---	DIBROMOCHLOROMETHANE	---	TOLUENE	---
CHLOROFORM	---	1,1,1-TRICHLOROETHANE	---	ETHYLBENZENE	---
METHYLENE CHLORIDE	---	1,2-DICHLOROPROPANE	---	1,1,2,2-TETRACHLOROETHANE	---
1,1-DICHLOROETHYLENE	---	trans-1,3-DICHLOROPROPYLENE	---	TETRACHLOROETHYLENE	---
1,1-DICHLOROETHANE	---	cis-1,3-DICHLOROPROPYLENE	---	CHLOROBENZENE	---
trans-1,2-DICHLOROETHYLENE	---				

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANTS BY COMPARISON WITH EPA/MIN MASS SPECTRAL LIBRARY. QUANTITATION IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE
COMPOUND
IDENTIFICATION

APPROXIMATE CONCENTRATIONS
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
() MILLIGRAMS/KILOGRAM

... BENZ(a)ANTHRACENE ... 2.9

COMMENTS AND OTHER REQUESTED ANALYSES:

NO HYDROCARBONS DETECTED

<5.0 ug/l

SIGNATURE

DATE

Richard A. Albert 8/21/86

ATTACHMENT NO. 10
CLOSURE PLAN - ACTIVE UNITS

W.J. SMITH WOOD PRESERVING COMPANY
DENISON, TEXAS
PRELIMINARY FACILITY CLOSURE PLAN

Introduction

The preliminary facility closure plan outlines the scope of work and general operational procedures proposed for the overall facility closure of W. J. Smith Wood Preserving Company, following the termination of production activities at the site.

W. J. Smith treats wood products by steam pressure-injection of creosote. The preserved wood products are used as railroad ties, bridge timbers, etc. Creosote is recycled in the process, as a material conservation and cost-saving measure. Boiler blowdown, spent condensate, and site stormwater drainage are collected in a treatment system which also recovers creosote for reuse.

The process water treatment system consists of two concrete separation basins (operated in series), a 450,000 gallon stormwater retention basin, a trickling filter biological treatment plant, and sludge drying beds.

Recovered creosote is collected in the bottom of the concrete separators, and pumped to the raw product storage and production tanks. Treated water flows by gravity from the separation basins to the 155' x 135' x 4' stormwater retention basin.

The stormwater retention basin receives flow from the concrete separators, boiler blowdown and condensate, and production area site drainage. This water is pumped over a pair of trickling filters for biological treatment of wood oils, sugars, and any excess phenolics. Following treatment, the water is pumped to the municipal collection system for final treatment at the Duck Creek wastewater treatment plant. The sludge produced by the system is dewatered on a series of drying beds. When dry, the sludge is containerized and disposed off-site.

Closure Procedures

The closure of the facility, upon termination of the production operation, will affect all components of the treatment system which contain hazardous materials.

The only material on the plant site which is listed as a hazardous waste is the bottom sediment from treatment of the wood processing wastewater. These sediments are contained in the stormwater retention basin and the sludge drying beds. Upon closure, these materials will be removed to a Class I waste disposal facility.

The closure of the waste management facilities will be conducted as follows:

- (1) All remaining creosote and bottom sediments within the waste management system will be containerized and transported to a permitted Class I Treatment Storage and Disposal (TSD) facility.

(2) All process piping and equipment which have become contaminated will be dismantled and transported to a permitted TSD facility.

(3) Contaminated water removed from the treatment structures and process piping will be treated within the existing system and discharged under an NPDES permit or to the municipal POTW.

(4) The stormwater retention basin will be sandblasted to remove residual contamination. Contained bottom sediments and residual cleaning materials will be containerized and transported to a permitted Class I TSD. Alternative cleaning methods may include wet sandblasting (hydroblasting) or steam cleaning, with similar disposal of cleaning materials. The basin will be considered clean at that point, and will be left in place.

(5) The drying beds will be cleaned in similar fashion, with residual cleaning materials containerized and disposed of at a TSD. The cleaned structures will remain in place.

Cost Estimate for Facility Closure
W. J. Smith Wood Preserving Company
Denison, Texas

Stormwater Retention Basin

Water Treated and Discharged to POTW 50,000 gallons at \$1.00	\$ -0-
Sandblasting of Basin 15,000 square feet at \$0.45	\$ 6,750
Removal and Class I Disposal of Cleaning Materials Estimated 400 cubic yards at \$90.00	<u>\$36,000</u>
Subtotal Stormwater Retention Basin	\$42,750

Sludge Drying Beds

Class I Disposal of Sludge and Process Piping Estimated 5 cubic yards at \$45.00	\$ 225
Sandblasting of Beds 600 square feet at \$0.45	\$ 270
Removal Class I Disposal of Cleaning Materials Estimated 100 cubic yards at \$45.00	<u>\$ 4,500</u>
Subtotal Sludge Drying Beds	\$ 4,995
Total Facility Closure Cost	\$47,745
Engineering/Contingencies (25%)	<u>\$11,936</u>
Total Closure Cost (Estimated)	\$59,681

ATTACHMENT NO. 11
SECTION 3010 NOTIFICATION

IX. DESCRIPTION OF HAZARDOUS WASTES (continued from front)

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24
7	8	9	10	11	12
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24
K10011					
19	20	21	22	23	24
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24
25	26	27	28	29	30
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24
U1051					
37	38	39	40	41	42
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24
43	44	45	46	47	48
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54
23 - 24	23 - 24	23 - 24	23 - 24	23 - 24	23 - 24

E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24.)

☐ 1. IGNITABLE
(D001)

☐ 2. CORROSIVE
(D002)

☐ 3. REACTIVE
(D003)

☐ 4. TOXIC
(D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE

Clarence C. Fehr

NAME & OFFICIAL TITLE (type or print)

Mr. Clarence C. Fehr, Vice President

DATE SIGNED

Aug 7, 1980

ATTACHMENT NO. 12
TEXAS PART A APPLICATION

TEXAS DEPARTMENT OF WATER RESOURCES

PERMIT APPLICATION
FOR

INDUSTRIAL SOLID WASTE STORAGE/PROCESSING/DISPOSAL FACILITY

PART A - FACILITY BACKGROUND INFORMATION

APPL. NO.	10786
COUNTY-DIST.	2-1000-4
MINOR REVISIONS or ADDITIONS	
ADM. REVIEW BY	JRB
COPIES SENT:	Dist-4
(CHECK)	<input checked="" type="checkbox"/>

I. GENERAL INFORMATION

A. Applicant: W. J. Smith Wood Preserving Company
(Individual, Corporation, or Other Legal Entity Name)

Address: 1700 West Morton Street (P.O. Box 703)

City: Denison State: Texas Zip Code: 75020

Telephone Number: 214-465-6161

B. Authorized Agents

- List those persons or firms authorized to act for the applicant during the processing of the permit application. Also indicate the capacity in which each person may represent the applicant (engineering, legal, etc.). The person listed first will be the primary recipient of correspondence regarding this application. Include the complete mailing addresses and phone numbers.

Dr. Albert H. Halff - Engineer
3636 Lemmon Avenue
Dallas, Texas 75219
1-214-526-8309

Mr. Bob Wilson - Lawyer
McGinnis, Lochridge and Kilgore
900 Congress Avenue
Austin, Texas 78701
1-512-476-6982

- List the individual and his/her mailing address that will be responsible for causing any necessary public notices to be published in the newspaper.

Name: Mr. Clarence C. Fehr

Address: P.O. Box 703

City: Denison State: Texas Zip Code: 75020

Telephone Number: 214-465-6161

RECEIVED

AUG 18 1980

PERMIT CONTROL
TDWR

3. List the applicant's authorized agent for service.

Name: Dr. Albert H. Halff

Address: 3636 Lemmon Avenue

City: Dallas State: Texas Zip Code: 75219

Telephone Number: 214-526-8309

C. Operator: Identify the entity who will conduct facility operations. If same as applicant, state "same as applicant."

Name: W. J. Smith Wood Preserving Company

Address: 1700 West Morton Street (P.O. Box 703)

City: Dallas State: Texas Zip Code: 75020

Telephone Number: 214-465-6161

D. Ownership

1. Indicate the ownership status of the facility:

a. Private X

- | | |
|-----------------------------|---------------|
| (1) Corporation | <u>X</u> |
| (2) Partnership | <u> </u> |
| (3) Proprietorship | <u> </u> |
| (4) Non-profit organization | <u> </u> |

b. Public

- | | |
|---------------|---------------|
| (1) Federal | <u> </u> |
| (2) Military | <u> </u> |
| (3) State | <u> </u> |
| (4) Regional | <u> </u> |
| (5) County | <u> </u> |
| (6) Municipal | <u> </u> |

c. Other (specify)

2. Is facility and site property owned by applicant?

X Yes No

If you checked "no",

- a. Submit as an attachment a copy of the lease for use of said facility and/or site property, as appropriate; and
- b. Identify the facility owner. If same as applicant in Part A above, state "same as applicant." If different from the applicant, please note that the owner is required to sign the application on page 5.

Name: "Same as Applicant"

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone Number: _____

E. Type of Permit Application:

1. New X
2. Amendment (TDWR Permit Number:)

F. Registration and Permit Information

1. Denote your TDWR Solid Waste Registration Number. If none, state "none."

31332

2. Indicate (by listing the permit number(s) in the appropriate column below) all existing or pending State and/or Federal permits or construction approvals which pertain to pollution control or industrial solid waste management activities conducted by your plant or at your location. Complete each blank by entering the permit number, or the date of application, or "none".

Relevant Program and/or Law

	Permit No.	Government Agency*
a. Texas Solid Waste Disposal Act	<u>31332</u>	<u>TDWR</u>
b. Wastewater disposal under the Texas Water Code	<u>Approved Permit 6/27/78</u>	<u>City of Denison</u>
c. Underground injection under the Texas Water Code	<u>None</u>	<u>-</u>
d. Texas Clean Air Act	<u>296</u>	<u>TACB</u>
e. Texas Uranium Surface Mining & Reclamation Act	<u>None</u>	<u>-</u>
f. Texas Surface Coal Mining & Reclamation Act	<u>None</u>	<u>-</u>
g. Hazardous Waste Management program under the Resource Conservation and Recovery Act	<u>None</u>	<u>-</u>

h. UIC program under the Safe Drinking Water Act	<u>None</u>	<u>-</u>
i. NPDES program under the Clean Water Act	<u>None</u>	<u>-</u>
j. PSD program under the Clean Air Act	<u>None</u>	<u>-</u>
k. Nonattainment program under the Clean Air Act	<u>None</u>	<u>-</u>
l. National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act	<u>None</u>	<u>-</u>
m. Ocean dumping permits under the Marine Protection Research and Sanctuaries Act	<u>None</u>	<u>-</u>
n. Dredge or fill permits under section 404 of the Clean Water Act	<u>None</u>	<u>-</u>
o. Other relevant environmental permits	<u>None</u>	<u>-</u>

* Use the following acronyms for each agency as shown below:

TDWR = Texas Department of Water Resources
TACB = Texas Air Control Board
TRC = Texas Railroad Commission
TDH = Texas Department of Health
TDA = Texas Department of Agriculture
EPA = U. S. Environmental Protection Agency
CORPS = U. S. Army Corps of Engineers

G. Description of Business

1. Give a brief description of the nature of your business.

W. J. Smith is in the business of preservation of wood. Basically wood is purchased in semi finished form, and is air dried. The wood is trimmed into finished form such as crossties or bridge timbers. A creosote perservative is injected into the wood in closed pressure cylinders.

2. List the principal products and/or services which are provided by your plant. Please itemize by Standard Industrial Classification (SIC) codes.

SIC Code 2491 Wood Preserving

I, Clarence C. Fehr, Vice President
(Name) (Title)

I, _____, _____
(Name) (Title)

Certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Signature: Clarence C. Fehr, Date: August 15, 1980

Signature: _____, Date: _____

SUBSCRIBED AND SWORN to before me by the said Clarence C. Fehr

_____ on this 15th day of August, 19 80.

My commission expires on the 31st day of March, 19 81.

[Signature]
Notary Public in and for

Grayson County, Texas

DATE 8/20/80 TEXAS DEPARTMENT OF WATER RESOURCES
AUSTIN, TEXAS RECEIPT NO. 803603

RECEIVED FROM W. G. Smith Wood Preserving AMOUNT 5.00
ADDRESS P.O. Box 0703 Denison, Tex.

Suspense Fund 900 Special Fund 41
FY _____ CC _____ FY _____ CC _____

Sales Tax Fund 961 Special Fund 123
FY _____ CC _____ FY _____ CC _____

General Rev. Fd 1, Unappropriated Special Fund 153
FY _____ CC _____ FY 80 CC 11371 5.00

General Rev. Fd 1, Appropriated Special Fund 158
FY _____ CC _____ FY _____ CC _____

Comptr. Rev. Code 3754 Source of Funds _____ Refund on War# _____

REMARKS: Waste discharge - Postage

Type of Remittance ck 013823 Received by [Signature]

II. SITE BACKGROUND INFORMATION

A. Location of Site

1. Facility Name: W. J. Smith Wood Preserving Company

Street Address, if available: 1700 West Morton Street

Denison, Texas 75020 County: Grayson

2. Are your waste management operations within the extraterritorial jurisdiction of a municipality?

X Yes No

If you checked "yes," what municipality? Denison

3. Give a verbal description of the location of the facility site with respect to known or easily identifiable landmarks.

W. J. Smith Wood Preserving Company is located 1.4 miles to the west from the intersection of U.S. 75 and Morton Street in Denison, Texas.

4. Detail the access routes from the nearest U.S. or State Highway to the facility site.

Precede on U.S. 75 to Morton Street in Denison, Texas turn west onto Morton Street from and cross railroad tracks. Continue on Morton Street for two blocks and turn left and go approximately 1/10 mile to main office.

5. Submit as "Attachment A" a United States Geological Survey (USGS), 7½ minute quadrangle map. Indicate on this map the location of the site and the land use patterns of the areas within 1 mile (1.6 km) of the site boundaries (e.g., residential, commercial, recreational, agricultural, undeveloped, etc.). Each area of land use should be labeled on the map. (Note: if such a map is not available, submit a substitute map such as a State Department of Highways and Public Transportation county map with sufficient scale to adequately show the site location and surrounding land use patterns.

6. a. Submit as "Attachment B" a map indicating the boundaries of all adjacent parcels of land, and a list of the names and mailing addresses of all adjacent landowners and other nearby landowners who might consider themselves affected by the activities described by this application. Cross-reference this list to the map through the use of appropriate keying techniques. The map should be a USGS map, a city or county plat, or another map or drawing with a scale adequate enough to show the cross-referenced affected landowners.

- b. Indicate from what source(s) the names and addresses of persons identified as affected were obtained.

City	_____
County	_____ <u>X</u> _____
School District	_____
Water District	_____
Abstract Co.	_____
Other (specify)	_____

7. Enter the geographical coordinates of the site:

Latitude: 33 deg 45 min 22 sec

Longitude: 96 deg 33 min 44 sec

8. Is the facility located on Indian lands? Check one:

_____ Yes X No

B. Legal Description of Site

Submit as "Attachment C" a legal description of the entire tract of land upon which the waste management operations referred to in this permit application occur or will occur.

C. Site Environmental and Technical Information

1. Climatic and Hydrologic

- a. Is any portion of your waste management facility site (including proposed, active, and inactive portions) subject to flooding from adjacent or nearby surface water bodies under the following conditions?

<u>24-hr Rainfall Event</u>	<u>Yes</u>	<u>No</u>
5-year	_____	<u>X</u>
50-year	_____	<u>X</u>
100-year	_____	<u>X</u>

- b. Are there any producing groundwater wells on your site property?

_____ Yes X No

If you checked "yes,"

(1) Indicate the number of such wells: _____, and

(2) Indicate the corresponding water uses below:

(a) Industrial uses:

Cooling water _____
Process water _____
Fire-control water _____

(b) Potable (drinking) water _____

(c) Agricultural uses:

Irrigation water for livestock food crops or grazing
land _____
Livestock watering _____
Irrigation water for human food crops _____

c. Are any adjacent or nearby surface waters utilized by the applicant?

_____ Yes X No

If you checked "yes," indicate the corresponding water uses below:

(1) Industrial uses:

Cooling water _____
Process water _____
Fire-control water _____

(2) Potable (drinking) water _____

(3) Agricultural uses:

Irrigation water for livestock food crops or grazing
land _____
Livestock watering _____
Irrigation water for human food crops _____

2. Site Land Use and Subsidence Information

a. Is any portion of the overall site property utilized for agricultural purposes?

_____ Yes X No

If you checked "yes," indicate the corresponding uses below:

(1) Grazing _____
(2) Livestock food crop _____
(3) Human food crop _____

If you checked no. (2) or (3), specify the types of crops grown. _____

b. Is any portion of the overall site property subject to land subsidence?

_____ Yes X No

If you checked "yes," estimate the magnitude of the greatest subsidence that has occurred (in units of feet). _____

III. WASTES AND WASTE MANAGEMENT

A. Waste Generation and Management Activities

Is any hazardous industrial solid waste (see Title 40, Code of Federal Regulations, Part 261) presently or proposed to be generated at your facility?

☒ Yes ☐ No

If you checked "no," go to Section III.B.2. below.

If you checked "yes," answer the following question.

1. Are you presently registered with TDWR as a solid waste generator?

☒ Yes ☐ No (but not for creosote sludge)

If you checked "no," contact the Solid Waste Section of TDWR in Austin, Texas to obtain registration information. Also, continue with the application form (go to Number 2 below).

If you checked "yes," go to Section I of your Notice of Registration, determine which of your wastes are hazardous, and list these wastes (and mixtures) in Table III-1 (see Number 2 below).

2. Complete Table III-1 below, listing all hazardous wastes and all mixtures containing any hazardous waste which are presently or proposed to be generated at your facility. (see 40 CFR 261.31-33), attaching additional copies as necessary.

In this table, "TDWR Sequence Number" refers to the number in the left-hand column in Section I of your Notice of Registration (Note: if you are not registered with TDWR, enter "NA" for TDWR Sequence Number and TDWR Waste Code Number).

For the EPA Hazard Code and EPA Hazardous Waste Numbers, see 40 CFR 261.30-33. For annual quantity, provide the amount in units of pounds (as generated) for each waste and/or waste mixture.

Please group the listings of wastes by SIC code, insofar as your processes are designated by SIC codings. Also, within the general SIC code groups, give a brief description of the specific process or operation from which the waste has been generated.

B. Waste Management Facilities Summary

1. For each waste and waste mixture listed in Table III-1 that is presently or proposed to be managed on-site, provide the summary sheet shown in Table III-2 (Note: you must make copies of Table III-2 and submit the completed set of tables as "Attachment D").

Table II-1 Generated Hazardous Wastes and Management Activities[illegible]

¹ "Storage" means the interim containment or control of waste after generation and prior to ultimate disposal.

2. "Processing" means the extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of hazardous waste so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced volume. The "transfer" of solid waste for reuse or disposal as used above, does not include the actions of a carrier in conveying or transporting solid waste by truck, ship, pipeline, or other means.

Table III-2 Hazardous Waste Management Facility Component Summary Sheet

Verbal Description of Waste

Creosote - Waste Sludge

Process (see last column in Table III-1)

2491 Wood Preserving

TDWR Sequence Number of Waste (if assigned)

Indicate the facility components used for storage/processing/disposal of the above-specified waste by entering the number of such facility components by which this waste is managed.

☐ Lagoon/Pond (unlined)

☐ Landfarm

☐ Lagoon/Pond (lined)

☐ Landspreading Area

☐ Basin (earthen, above-grade lined)

☐ Spray Irrigation Area

☒ 1 Basin (earthen, above-grade unlined)

☐ Flood Irrigation Area

☐ Basin (earthen, below-grade lined)

☐ Septic Tank/Drain Field

☐ Basin (earthen, below-grade unlined)

☐ Injection Well

☒ 2 Basin (concrete, above-grade lined)

☐ Tank (surface storage)

☐ Basin (concrete, above-grade unlined)

☐ Tank (sub-surface storage)

☐ Basin (concrete, below-grade lined)

☐ Tank (surface processing)

☐ Basin (concrete, below-grade unlined)

☐ Tank (sub-surface processing)

☐ Basin (other)

☐ Tank (other)

☐ Pit (lined)

☐ Drum Storage Area (open)

☐ Pit (unlined)

☐ Drum Storage Area (enclosed)

☐ Incinerator

☐ Drum Storage Area (other)

☐ Open Controlled Incineration Area

☐ Bulk Storage Area (open)

☐ Boiler (energy-producing)

☐ Bulk Storage Area (enclosed)

☐ Landfill (sanitary)

☐ Bulk Storage Area (other)

☐ Landfill (surface, open)

☐ Other (specify Bacteriological

☐ Landfill (other)

Waste Water Treatment Plant)

2. Has the applicant at any time conducted the on-site storage, processing, or disposal of industrial solid waste now identified or listed as hazardous waste?

X Yes No

If you checked "yes," complete Table III-3 indicating the hazardous industrial solid waste management facility components which were once utilized at your plant site but are no longer in service (i.e., inactive facility components).

If you checked "no," and if no hazardous industrial solid waste is presently or proposed to be generated or managed at your facility, then you need not file this permit application. Otherwise, proceed with application form.

3. For each facility component indicated in Table III-2 (Attachment D) and Table III-3, complete the following Table III-4 attaching additional copies as necessary. Enter the name of each facility component as specified in the earlier tables.

Give the design capacity of each facility component in any of the units shown. In the case of inactive facilities for which design details are unavailable, an estimate of the design capacity is sufficient.

Please note that each facility component should be described in your own words on the line provided for "verbal description."

4. Provide an estimate of the total weight (lbs) of hazardous industrial solid waste material that has been disposed of and/or stored within your site boundaries and not removed to another site.

Not Available. Waste gradually digests in basin. No haul away has been required for the last nine years.

C. Location of Waste Management Facilities and Components

1. Submit as "Attachment E" a drawn-to-scale topographic map (or other map if a topographic map is unavailable) extending one mile (and only one mile) beyond the property boundaries of the overall plant site, depicting the following:

- a. The approximate boundaries of the site (described in Section II B) and within these boundaries, the location and boundaries of the areas occupied by each active, inactive, and proposed facility component (see Tables III-2 and III-3 for facility components). Each depicted area should be labeled to identify the facility component(s), component status (i.e., active, inactive, or proposed), and area size in acres.

Table III-3 Inactive Hazardous Industrial Solid Waste Management Facility Components

Indicate the inactive facility components which were used for storage/processing/disposal of hazardous wastes or mixtures containing any hazardous waste by entering the number of such facility components in the space provided.

- | | |
|--|--|
| <input type="checkbox"/> Lagoon/Pond (lined) | <input type="checkbox"/> Landspreading Area |
| <input type="checkbox"/> Basin (earthen, above-grade lined) | <input type="checkbox"/> Spray Irrigation Area |
| <input checked="" type="checkbox"/> 5 Basin (earthen, above-grade unlined) | <input type="checkbox"/> Flood Irrigation Area |
| <input type="checkbox"/> Basin (earthen, below-grade lined) | <input type="checkbox"/> Septic Tank/Drain Field |
| <input type="checkbox"/> Basin (earthen, below-grade unlined) | <input type="checkbox"/> Injection Well |
| <input type="checkbox"/> Basin (concrete, above-grade lined) | <input type="checkbox"/> Tank (surface storage) |
| <input type="checkbox"/> Basin (concrete, above-grade unlined) | <input type="checkbox"/> Tank (sub-surface storage) |
| <input type="checkbox"/> Basin (concrete, below-grade lined) | <input type="checkbox"/> Tank (surface processing) |
| <input type="checkbox"/> Basin (concrete, below-grade unlined) | <input type="checkbox"/> Tank (sub-surface processing) |
| <input type="checkbox"/> Basin (other) | <input type="checkbox"/> Tank (other) |
| <input type="checkbox"/> Pit (lined) | <input type="checkbox"/> Drum Storage Area (open) |
| <input type="checkbox"/> Pit (unlined) | <input type="checkbox"/> Drum Storage Area (enclosed) |
| <input type="checkbox"/> Incinerator | <input type="checkbox"/> Drum Storage Area (other) |
| <input type="checkbox"/> Open Controlled Incineration Area | <input type="checkbox"/> Bulk Storage Area (open) |
| <input type="checkbox"/> Boiler (energy-producing) | <input type="checkbox"/> Bulk Storage Area (enclosed) |
| <input type="checkbox"/> Landfill (sanitary) | <input type="checkbox"/> Bulk Storage Area (other) |
| <input type="checkbox"/> Landfill (surface, open) | <input type="checkbox"/> Other (specify _____) |
| <input type="checkbox"/> Landfill (other) | |

Table III-4 Hazardous Waste Facility Components List

Facility Component		Status			Design Capacity			Number of Years Utilized	Date In Service
Name	TOWR Seq. No.	Inactive	Active	Proposed	(cu yds)	(gal)	(lbs)		
Retention Basin (Concrete-lined)	1		X			50 gpm		9	1971
Verbal Description: The 450,000 gallon concrete lined basin serves as a sedimentation and equalization basin with a 24-hour detention period. The basin is also designed for spillage control and will treat the first one-inch of storm water runoff.									
Bacteriological Waste Water Treatment Plant	1		X			50 gpm		8	1972
Verbal Description: Trickling filter has an area equivalent to a 16.3 foot circular tower with a height of 22 feet. The influent rate is 0.0403 mdg and recirculation rate is 0.5256 mdg. The effluent enters the Denison sanitary sewer.									
Rock Hole	1		X			400		71	1909
Verbal Description: Concrete lined tank collects discharge waste water from process blow down tank.									
Clay Hole	1		X			500		71	1909
Verbal Description: Earthen berm tank separates recoverable creosote from waste water.									
Earthen Basins	1		X			Unknown		62	1909 to 1971
Verbal Description: Storage of sugars, starches, wood resins, and creosote waste water.									
Verbal Description:									

- b. The overall facility and all surface intake and discharge structures;
 - c. All injection wells where liquids are injected underground;
 - d. All known monitor wells and boreholes within the property boundaries of the overall plant site; and
 - e. All wells, springs, other surface water bodies, and drinking water wells within the map area and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).
2. Submit as "Attachment F" photographs which clearly delineate all hazardous waste facility structures and storage, processing, and disposal areas, as well as sites of future storage, processing, and disposal areas.

D. Flow Diagram/Description

Show as "Attachment G" process flow diagrams or step-by-step word descriptions of the process flow, depicting the handling, collection, storage, processing, and/or disposal of each of the hazardous wastes previously listed in this application.

The flow diagrams or descriptions should include the following information:

1. Originating point of each waste and waste classification code;
2. Means of conveyance utilized in every step of the process flow;
3. Name and function of each facility component through which the waste passes;
4. The ultimate disposition of all wastes (if off-site, specify "off-site") and waste residues.

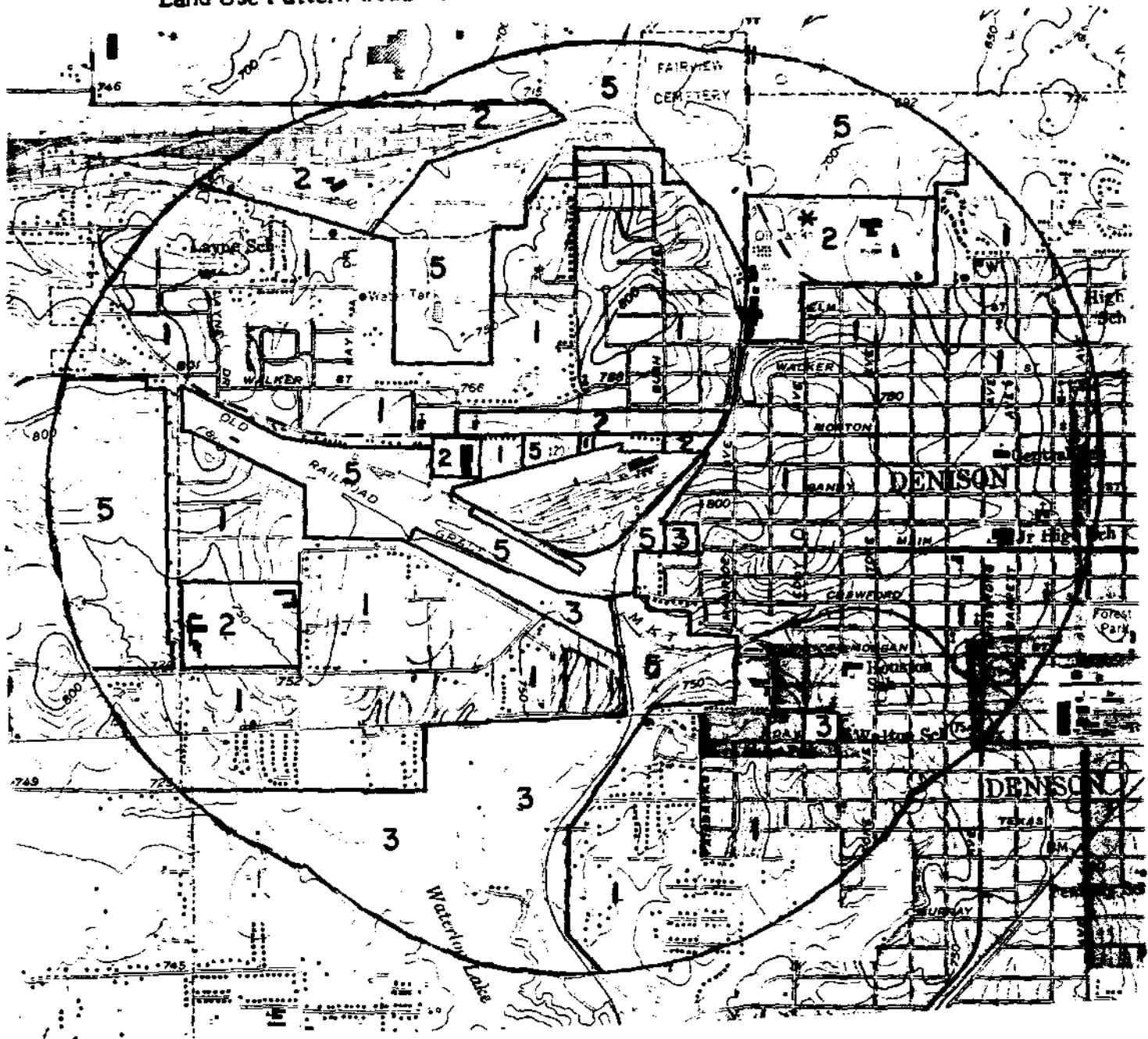
IV. INDEX OF ATTACHMENTS

List and index below all attachments to this application and indicate if included or not included:

<u>Item</u>	<u>Mandatory Attachments</u>	<u>Attachment</u>	<u>Included</u>	<u>Not Included</u>
II.A.5.	USGS map	<u>A</u>	<u>X</u>	<u>—</u>
II.A.6.a.	Affected landowners	<u>B</u>	<u>X</u>	<u>—</u>
II.B.	Site legal description	<u>C</u>	<u>X</u>	<u>—</u>
III.B.1.	Hazardous waste facility component summary sheets	<u>D</u>	<u>X</u>	<u>—</u>
III.C.1.	Facility boundaries and adjacent waters map	<u>E</u>	<u>X</u>	<u>—</u>
III.C.2.	Photographs	<u>F</u>	<u>X</u>	<u>—</u>
III.D.	Process flow diagram/description	<u>G</u>	<u>X</u>	<u>—</u>
	<u>Other Attachments as Required</u>			
I.D.2.a.	Lease	<u>—</u>	<u>—</u>	<u>X</u>
III.A.2.	Additional generated waste list (Table III-1)	<u>—</u>	<u>—</u>	<u>X</u>
III.B.3.	Additional hazardous waste facility components list (Table III-4)	<u>—</u>	<u>—</u>	<u>X</u>

ATTACHMENT A

Land Use Pattern Within One Mile of W. J. Smith Wood Preserving Company



Scale 1" = 2,000'

Legend

- Residential - 1
- Commerical - 2
- Recreational - 3
- Agricultural - 4
- Undeveloped - 5

Source:

Maps are U.S.G.C. 7.5 Minute Quad.
Denison Dam, Texas - Oklahoma
(Photorevised 1973)
Sherman, Texas (photorevised 1974)

C.N. - 10786

ATTACHMENT B

Names and Addresses of Property Owners Adjacent to W. J. SMITH WOOD PRESERVING COMPANY

Cross Reference to Attachment Map B

Area 1 - South of Morton Street (East of Bush Avenue) Block ten (10).

Lot 77	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 76	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 75	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 74	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 73	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 72	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 72	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 71	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 70	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 69	The Cole Company 1611 West Morton Street Denison, Texas 75020
Lot 68	Cole Lumber Company 1530 West Morton Street Denison, Texas 75020

Area 2 - South of Morton Street (West of Bush Avenue) Block Eleven (11) West End Addition.

Lot 12	Hodge Herman 1800 West Morton, Denison, Texas 75020
Lot 11	Hodge Herman 1800 West Morton, Denison, Texas 75020
Lot 10	Hodge Herman 1800 West Morton, Denison, Texas 75020
Lot 9	Ray Jimmy 6901 Lakeview Denison, Texas 75020
Lot 8	Deleted
Lot 7	Ellison Ted A 1701 West Morton, Denison, Texas 75020
Lot 6	Ellison Ted A 1701 West Morton, Denison, Texas 75020
Lot 5	Ellison Ted A 1701 West Morton, Denison, Texas
Lot 4	Ellison Ted A 1701 West Morton, Denison, Texas
Lot 3	James George E 304 South Jennie Lane Denison, Texas 75020
Lot 2	RG Hall 1700 West Morton, Denison, Texas
Lot 1	RG Hall 1700 West Morton, Denison, Texas 75020

Area 3 - South of Morton Street (Addition 3203) Block three (3)

Parcel

7	Westbrook W.F. 193 Campbell Drive. Lewisville, Texas 75067
8	Warren John 1822 West Morton Street Denison Texas 75020
9	Sonnerburge David Michel 1824 West Morton Street Denison, Texas 75020
10	Svane RL 2021 West Walker Denison, Texas 75020
11	Steven Walter D. Jr. 1828 West Morton Street Denison, Texas 75020
12	Ellison Ted A 1701 West Morton Street Denison, Texas 75020

ATTACHMENT B CONTINUED

Area 4 - South of Morton Street Hardin Jones Abstract - A630

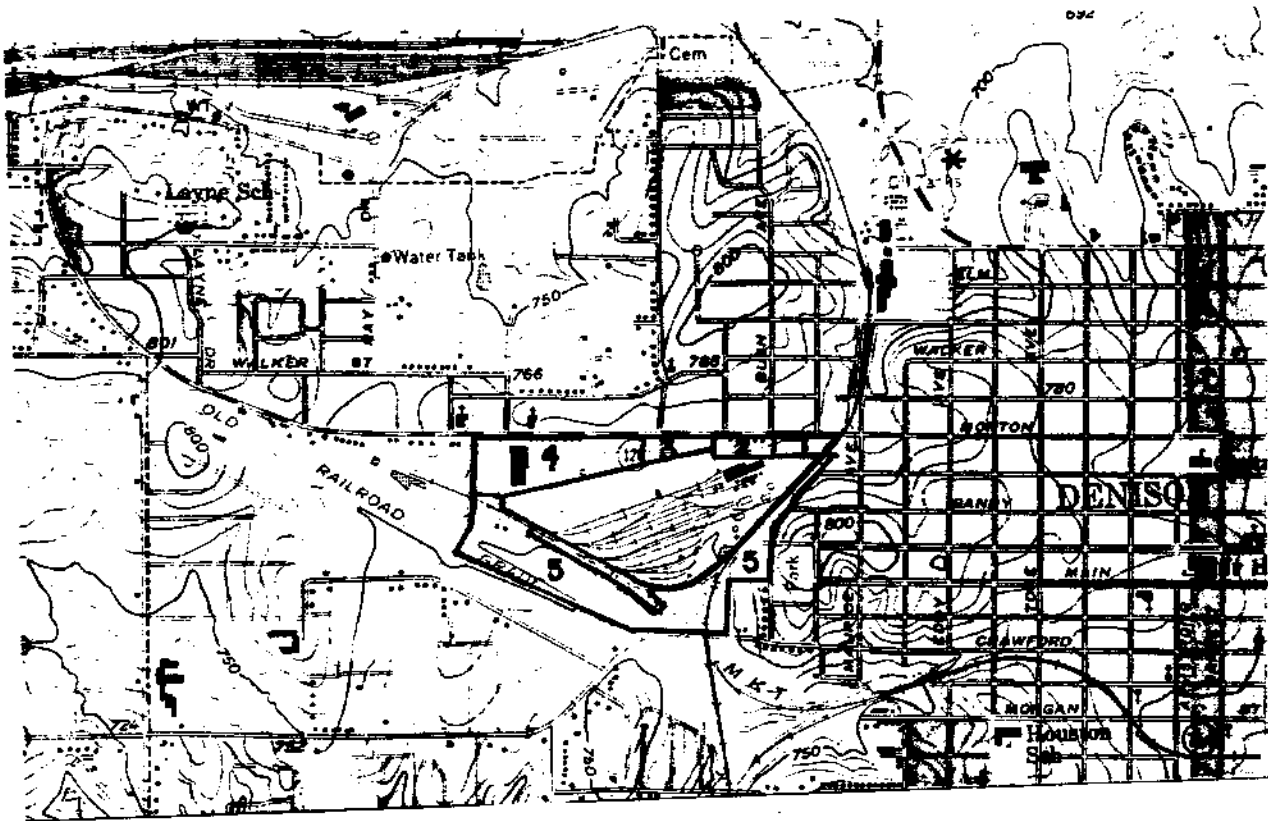
Parcel	
121	Streetman L.J. 324 N. Central Expressway Suite 112, Richardson, Texas 75080
121.01	Garner Richard G 609 Queens Denison, Texas 75020
127	Hollowell Earl E. 2000 West Morton, Denison, Texas 75020
128	Murray Properties, Att: Vernon Smith, P.O. Box 47791, Dallas, Texas 75247 (Part of West Park Shopping Center)

Area 5 - Land bordering the west, south and east sides of W. J. Smith Wood Preserving Company Hardin Jones Abstract - A630

Parcel	
218.01	MK&T R.R. Company 701 Commerce Street, Dallas, Texas 75202

ATTACHMENT B

Land Adjacent to W. J. Smith Wood Preserving Company



ATTACHMENT C

LEGAL DESCRIPTION OF THE W. J. SMITH WOOD PRESERVING COMPANY PLANT PROPERTY

Two tracts of land out of the Hardin Jones Headright, in the City of Denison, in Grayson County, Texas, more particularly described as follows:

TRACT NO. I

BEGINNING at the Northwest corner of Lot Twelve (12) in Block Eleven (11) of West End Addition to the City of Denison, Texas;

THENCE South, with West line of Lot Twelve (12), 46 feet to a steel rail for the point of beginning;

THENCE continuing South with said West line and West line produced 120.56 feet to a steel rail;

THENCE North $89^{\circ}30'34''$ East 1152.27 feet to a point, said point being 40 feet at right angles Northwesterly from the center line of main track of Missouri-Kansas-Texas Railroad Company of Texas, known as the Warner Cut-Off at Valuation Chaining Station 223 plus 76.1, said point being also 169.5 feet South of the South line of Morton Street;

THENCE South $41^{\circ}54'07''$ West, 1582.95 feet, to a curve radius of 723.75 feet - L 757.38 feet, South $11^{\circ}51'44''$ West 27.85 feet, D - $7^{\circ}37'24''$ - R - 751.60 feet;

THENCE North $61^{\circ}39'52''$ - West 1421.22 feet;

THENCE North $28^{\circ}15'28''$ East 45.87 feet;

THENCE North $69^{\circ}41'45''$ East 2164.39 feet to point of beginning and containing 58.67 acres of land more or less.

TRACT NO. II

STARTING at a point from the extreme Northwest corner of Tract No. 1;

THENCE South $61^{\circ}39'52''$ East 249.22 feet;

THENCE South $28^{\circ}20'08''$ West 22.85 feet to point of beginning of Tract No. 2;

THENCE South $61^{\circ}39'52''$ East 1172.00 feet;

THENCE North $30^{\circ}08'08''$ East 15 feet, to a curve L - 250.00 feet, D - $10^{\circ}12'$, R 561.73 feet;

THENCE South $55^{\circ}38'08''$ West 70.0 feet, to a curve L - 218.85 feet, D - $11^{\circ}59'10''$ R - 491.73 feet;

THENCE North $61^{\circ}39'52''$ West 1172.00 feet;

THENCE North $28^{\circ}20'08''$ East 55.00 feet to beginning point and containing 2.02 acres of land more or less.

ATTACHMENT D

Hazardous Waste Facility Component Summary Sheets

TABLE III-2

Table III-2 Hazardous Waste Management Facility Component Summary Sheet

Verbal Description of Waste

Creosote - Waste Sludge

Process (see last column in Table III-1)

2491 Wood Preserving

TDWR Sequence Number of Waste (if assigned)

Indicate the facility components used for storage/processing/disposal of the above-specified waste by entering the number of such facility components by which this waste is managed.

☐ Lagoon/Pond (unlined)

☐ Landfarm

☐ Lagoon/Pond (lined)

☐ Landspreading Area

☐ Basin (earthen, above-grade lined)

☐ Spray Irrigation Area

☒ 1 Basin (earthen, above-grade unlined)

☐ Flood Irrigation Area

☐ Basin (earthen, below-grade lined)

☐ Septic Tank/Drain Field

☐ Basin (earthen, below-grade unlined)

☐ Injection Well

☒ 2 Basin (concrete, above-grade lined)

☐ Tank (surface storage)

☐ Basin (concrete, above-grade unlined)

☐ Tank (sub-surface storage)

☐ Basin (concrete, below-grade lined)

☐ Tank (surface processing)

☐ Basin (concrete, below-grade unlined)

☐ Tank (sub-surface processing)

☐ Basin (other)

☐ Tank (other)

☐ Pit (lined)

☐ Drum Storage Area (open)

☐ Pit (unlined)

☐ Drum Storage Area (enclosed)

☐ Incinerator

☐ Drum Storage Area (other)

☐ Open Controlled Incineration Area

☐ Bulk Storage Area (open)

☐ Boiler (energy-producing)

☐ Bulk Storage Area (enclosed)

☐ Landfill (sanitary)

☐ Bulk Storage Area (other)

☐ Landfill (surface, open)

☐ Other (specify Bacteriological

☐ Landfill (other)

Waste Water Treatment Plant

ATTACHMENT E

Location of Waste Management Facilities and Components

Three Maps

- III.C.1 U.S.G.S. 1'=2,000" of Site and Land Extending One Only.**
- III.C.1a. Map of Facility Site, and map of wastewaste disposal system.**
- III.C.1b. None**
- III.C.1c. None**
- III.C.1d. None**
- III.C.1e. Waterloo Lake - Park**

ATTACHMENT NO. 13

CREOSOTE COMPOUNDS

CREOSOTE COMPOUNDS

	<u>Formula</u>	<u>Boiling Point</u>
Coumarone	C ₈ H ₆ O	174
p-Cymene	C ₁₀ H ₁₄	177
Indene	C ₉ H ₈	182
Phenol	C ₆ H ₆ O	181
O-Cresol	C ₇ H ₈ O	190
Benzonitrile	C ₇ H ₅ N	191
m-Cresol	C ₇ H ₈ O	202
Naphthalene	C ₁₀ H ₈	218
Thionaphthene	C ₈ H ₆ S	222
Quinoline	C ₉ H ₇ N	243
2-Methylnaphthalene	C ₁₁ H ₁₀	241
Isoquinoline	C ₉ H ₇ N	238
1-Methylnaphthalene	C ₁₁ H ₁₀	245
4-Indanol	C ₉ H ₁₀ O	245
2-Methylquinoline	C ₁₀ H ₉ N	247
Indole	C ₈ H ₇ N	252
Diphenyl	C ₁₂ H ₁₀	255
1, 6-Dimethylnaphthalene	C ₁₂ H ₁₂	262
2, 3-Dimethylnaphthalene	C ₁₂ H ₁₂	266
Acenaphthene	C ₁₂ H ₁₀	281
Dibenzofuran	C ₁₂ H ₁₀ O	287
Fluorene	C ₁₃ H ₁₀	299

	<u>Formula</u>	<u>Boiling Point</u>
1-Naphthonitrile	C ₁₁ H ₇ N	297
3-Methyldiphenylene	C ₁₃ H ₁₀ O	298
2-Naphthonitrile	C ₁₁ H ₇ N	304
9, 10-Dihydroanthracene	C ₁₄ H ₁₀	305
2-Methylfluorene	C ₁₄ H ₁₂	318
Diphenylene Sulfide	C ₁₂ H ₈ S	332
Phenanthrene	C ₁₄ H ₁₀	340
Anthracene	C ₁₄ H ₁₀	342
Acridene	C ₁₃ H ₉ N	346
3-Methylphenanthrene	C ₁₃ H ₁₂	350
Carbazole	C ₁₂ H ₉ N	352
4, 5-Methylenephenanthrene	C ₁₅ H ₁₀	353
2-Methylantracene	C ₁₅ H ₁₂	360
9-Methylantracene	C ₁₅ H ₁₂	361
2-Methylcarbazole	C ₁₃ H ₁₁ N	363
Fluoranthene	C ₁₆ H ₁₀	382
1, 2-Benzodiphenylene	C ₁₆ H ₁₀ O	395
Pyrene	C ₁₆ H ₁₀	393
Benzofluorene	C ₁₇ H ₁₂	413
Chrysene	C ₁₈ H ₁₂	448

ATTACHMENT NO. 14
PENALTY CALCULATIONS

PENALTY SUMMATION

TOTAL PENALTY=SUM OF ALL THE INDIVIDUAL VIOLATION PENALTIES

\$ 25,000	PERMITS	
\$ 17,000	FINANCIAL	note 1
\$ 50,000	GROUNDWATER	note 2
9,500	CLOSURE PLAN	
<u>101,500</u>	<u>TOTAL</u>	note 3

note 1--The calculated economic benefit of noncompliance is \$15,715.

note 2--The calculated economic benefit of noncompliance is \$25,551.

note 3--In no case should EPA settle for less than \$41,266 which is the total economic benefit derived by W. J. Smith for noncompliance.

The economic benefit to W. J. Smith for failing to install a groundwater monitoring system until October 1985 was calculated based on the following assumption.

W. J. Smith drilled seven wells; the economic benefit calculations were based on the "average" well described below:

- 100 feet deep
- 25 feet of screen
- 75 feet of casing
- 70 feet of sand pack
- 30 feet of grouting
- 4 inch inside diameter PVC casing
- A hollow stem auger

PENALTY COMPUTATION WORKSHEET

Company Name: W. J. Smith Wood Preserving Co.

Regulation Violated 40 CFR 265 Subpart H

Assessments for each violation should be determined on separate worksheets and totalled.

(If more space is needed, attach separate sheet.)

Part I - Seriousness of Violation Penalty

1. Potential for Harm: MAJOR

2. Extent of Deviation: MAJOR

3. Matrix Cell Range: 20,000 - 25000

Penalty Amount Chosen: 20,000

Justification for Penalty Amount Chosen: Low end of scale insurance difficult to acquire

4. Per-Day Assessment: 20,000

Part II - Penalty Adjustments

	<u>Percentage Change*</u>	<u>Dollar Amount</u>
1. Good faith efforts to comply/lack of good faith:	<u>15%</u>	<u>- 3000</u>
2. Degree of willfulness and/or negligence:	<u>N/A</u>	<u>N/A</u>
3. History of noncompliance:	<u>N/A</u>	<u>N/A</u>
4. Other unique factors:	<u>N/A</u>	<u>N/A</u>

5. Justification for Adjustments: sudden/unexpected liability insurance is difficult to acquire - the company was tried

* Percentage adjustments are applied to the dollar amount calculated on line 4, Part I.

PENALTY COMPUTATION WORKSHEET (cont.)

6. Adjusted Per-day Penalty (Line 4, Part I + Lines 1-4, Part II):	<u>17,000</u>
7. Number of Days of Violation:	<u>1</u>
8. Multi-day Penalty (Number of days x Line 6, Part II):	<u>17,000</u>
9. Economic Benefit of Noncompliance: <i>Cost of INSURANCE premium * (1-T)</i>	<u>15,715</u>
Justification:	
10. Total (Lines 8 + 9, Part II):	<u>17,000</u>
11. Ability to Pay Adjustment:	
Justification for Adjustment:	<u>N/A</u>
12. Total Penalty Amount (must not exceed \$25,000 per day of violation):	<u>17,000</u>

Financial Violation Penalty Calculation

W.J. Smith received two rate quotations for sudden/non sudden liability insurance. The quotations for: \$3,000,000 per occurrence, and \$6,000,000 aggregate. In each quotation, rates were quoted for two different deductibles.

Deductible per occurrence	Premium Quotation	
	1	2
\$ 50,000	\$ 29,250	\$ 35,060
\$ 100,000	\$ 21,250	\$ 30,850

The AVERAGE of the quotation is =

$$\bar{E} = 116,410$$

$$\frac{\bar{E}}{i} = 29,102.50/\text{yr}$$

Benefit from avoided cost

$$\text{Economic Benefit} = \text{Avoided costs} (1-T) + \left(\frac{\text{Delayed Costs}}{\text{Costs}} \times \text{Interest Rate} \right)$$

$T \equiv$ the firm's MARGINAL TAX RATE - in the absence of better information Assume
 $T = 0.46$

$$\text{Economic benefit} = 29,102 (0.54) = 15,715.00$$

PENALTY COMPUTATION WORKSHEET

Company Name: W. J. Smith Wood Preserving Company

Regulation Violated RCRA 3005(a) - Permits

Assessments for each violation should be determined on separate worksheets and totalled.

(If more space is needed, attach separate sheet.)

Part I - Seriousness of Violation Penalty

1. Potential for Harm:

MAJOR

2. Extent of Deviation:

MAJOR

3. Matrix Cell Range:

20,000 - 25000

Penalty Amount Chosen:

25,000

Justification for Penalty Amount Chosen:

operating w/o permit prevents RCRA and other regulatory agencies from insuring site operation

4. Per-Day Assessment:

25,000

Part II - Penalty Adjustments

	<u>Percentage Change*</u>	<u>Dollar Amount</u>
1. Good faith efforts to comply/lack of good faith:	<u>N/A</u>	<u>N/A</u>
2. Degree of willfulness and/or negligence:	<u>N/A</u>	<u>N/A</u>
3. History of noncompliance:	<u>N/A</u>	<u>N/A</u>
4. Other unique factors:	<u>N/A</u>	<u>N/A</u>
5. Justification for Adjustments:		

* Percentage adjustments are applied to the dollar amount calculated on line 4, Part I.

PENALTY COMPUTATION WORKSHEET (cont.)

6. Adjusted Per-day Penalty (Line 4, Part I + Lines 1-4, Part II):	<u>25,000</u>
7. Number of Days of Violation:	<u>1</u>
8. Multi-day Penalty (Number of days x Line 6, Part II):	<u>25,000</u>
9. Economic Benefit of Noncompliance:	<u>N/A</u>
Justification:	
10. Total (Lines 8 + 9, Part II):	<u>25,000</u>
11. Ability to Pay Adjustment:	
Justification for Adjustment:	<u>N/A</u>
12. Total Penalty Amount (must not exceed \$25,000 per day of violation):	<u>25,000</u>

PENALTY COMPUTATION WORKSHEET

Company Name: W. J. Smith Wood Preserving Co.

Regulation Violated 40 CFR 265 Subpart F

Assessments for each violation should be determined on separate worksheets and totalled.

(If more space is needed, attach separate sheet.)

Part I - Seriousness of Violation Penalty

1. Potential for Harm: Major

2. Extent of Deviation: Major

3. Matrix Cell Range: 20,000 - 25000

Penalty Amount Chosen: 25,000

Justification for Penalty
Amount Chosen:

4. Per-Day Assessment: 25,000

Part II - Penalty Adjustments

	<u>Percentage Change*</u>	<u>Dollar Amount</u>
1. Good faith efforts to comply/lack of good faith:	<u>N/A</u>	<u>N/A</u>
2. Degree of willfulness and/or negligence:	<u>N/A</u>	<u>N/A</u>
3. History of noncompliance:	<u>N/A</u>	<u>N/A</u>
4. Other unique factors:	<u>N/A</u>	<u>N/A</u>
5. Justification for Adjustments:		

* Percentage adjustments are applied to the dollar amount calculated on line 4, Part I.

PENALTY COMPUTATION WORKSHEET (cont.)

6. Adjusted Per-day Penalty (Line 4, Part I + Lines 1-4, Part II):	<u>25,000</u>
7. Number of Days of Violation:	<u>2</u>
8. Multi-day Penalty (Number of days x Line 6, Part II):	<u>25,000</u>
9. Economic Benefit of Noncompliance:	<u>25551</u>
Justification: <i>NO GROUNDWATER MONITORING wells from 1980-1985</i>	
10. Total (Lines 8 + 9, Part II):	<u>50,000</u>
11. Ability to Pay Adjustment:	
Justification for Adjustment:	<u>N/A</u>
12. Total Penalty Amount (must not exceed \$25,000 per day of violation):	<u>50,000</u>

PENALTY COMPUTATION WORKSHEET

Company Name: W. J. Smith Wood Preserving Co.

Regulation Violated 40 CFR 265 SubPART G

Assessments for each violation should be determined on separate worksheets and totalled.

(If more space is needed, attach separate sheet.)

Part I - Seriousness of Violation Penalty

1. Potential for Harm: Moderate

2. Extent of Deviation: Major

3. Matrix Cell Range: 8,000 - 10,999

Penalty Amount Chosen: 9,500

Justification for Penalty Amount Chosen: midrange

4. Per-Day Assessment: 9,500

Part II - Penalty Adjustments

	<u>Percentage Change*</u>	<u>Dollar Amount</u>
1. Good faith efforts to comply/lack of good faith:	<u>N/A</u>	<u>N/A</u>
2. Degree of willfulness and/or negligence:	<u>N/A</u>	<u>N/A</u>
3. History of noncompliance:	<u>N/A</u>	<u>N/A</u>
4. Other unique factors:	<u>N/A</u>	<u>N/A</u>
5. Justification for Adjustments:		

* Percentage adjustments are applied to the dollar amount calculated on line 4, Part I.

PENALTY COMPUTATION WORKSHEET (cont.)

6. Adjusted Per-day Penalty (Line 4, Part I + Lines 1-4, Part II):	<u>9,500</u>
7. Number of Days of Violation:	<u>1</u>
8. Multi-day Penalty (Number of days x Line 6, Part II):	<u>9,500</u>
9. Economic Benefit of Noncompliance:	<u>N/A</u>
Justification:	
10. Total (Lines 8 + 9, Part II):	<u>9,500</u>
11. Ability to Pay Adjustment:	
Justification for Adjustment:	<u>N/A</u>
12. Total Penalty Amount (must not exceed \$25,000 per day of violation):	<u>9,500</u>

Figures based on:

7 wells
100' deep
25' screens — 75' casing
70' sand packs
30' ~~grouting~~
4" inside diameter
PVC construction
Hollow stem auger

Drilling =	\$1200		} 1982 dollars
Screen =	250	\$10/ft	
Casing =	1275	\$17/ft	
Sand pack =	\$238	\$13/ft ³	
Grouting =	167	\$21/ft ³	
		<u>\$3130</u>	per well

$3130 \times 7 = \textcircled{\$21910}$ capital investment
(i.e. - costs will be incurred upon replacement.)

Sampling & Analysis - O&M expense

11/81 → 11/82 Quarterly sampling of the following
drinking water parameters

11/81, 2/82, 5/82, 8/82

\$197/well

$$197 \times 7 \text{ wells} \times 4 \text{ yrs} = 5516$$

Indicator parameters

\$125/set/well

$$125 \times 7 \times 4$$

$$= 3500$$

g.w. quality parameters

\$85/well

$$85 \times 7 \times 4$$

$$= 2380$$

$$\textcircled{11396/\text{yr}}$$

11/82 → 10/85 Annual & Semiannual
(3 yrs) (6 events)

11/82, 5/83, 11/83, 5/84,
11/84, 5/85

Semiannual sampling of indicator para.-
 $125 \times 2 \times 7 = 1750/\text{yr}$

Annual sampling of g.w. quality para.-
 $35 \times 7 = 245/\text{yr}$

$$\textcircled{\$2345/\text{yr}}$$

~~Last~~

For Construction of
Seven (7) wells which
should have been
completed by 11/81.

W. J. SMITH WOOD PRESERVING

SEPTEMBER 17, 1986

THE ECONOMIC BENEFIT OF A 47 MONTH DELAY
AS OF THE PENALTY PAYMENT DATE, 59 MONTHS
AFTER THE INITIAL DATE OF NONCOMPLIANCE \$ 9559
=====

-->-->-->--> THE ECONOMIC SAVINGS CALCULATION ABOVE <--<--<--<--<
USED THE FOLLOWING VARIABLES:

USER SPECIFIED VALUES

1. CASE NAME= W. J. SMITH WOOD PRESERVING
2. INITIAL CAPITAL INVESTMENT = \$ 0
3. ONE-TIME NONDEPRECIABLE EXPENDITURE = \$ 21910 1982 DOLLARS
(TAX DEDUCTIBLE EXPENSE)
4. ANNUAL O&M EXPENSE= \$ 0
5. FIRST MONTH OF NONCOMPLIANCE= 11, 1981
6. COMPLIANCE DATE= 10, 1985
7. PENALTY PAYMENT DATE= 10, 1986

STANDARD VALUES

8. USEFUL LIFE OF POLLUTION CONTROL EQUIPMENT = 15 YEARS
9. INVESTMENT TAX CREDIT RATE = 10.00 %
10. MARGINAL INCOME TAX RATE = 50.00 %
11. ANNUAL INFLATION RATE= 4.50 %
12. DISCOUNT RATE = 18.69 %
13. AMOUNT OF LOW INTEREST FINANCING = \$ 0

Quarterly sampling
that should have
been completed between
11/81 and 11/82

W. J. SMITH WOOD PRESERVING

SEPTEMBER 17, 1986

THE ECONOMIC BENEFIT OF A 12 MONTH DELAY
AS OF THE PENALTY PAYMENT DATE, 59 MONTHS
AFTER THE INITIAL DATE OF NONCOMPLIANCE

\$ 10879

=====

-->-->-->--> THE ECONOMIC SAVINGS CALCULATION ABOVE <--<--<--<--<
USED THE FOLLOWING VARIABLES:

USER SPECIFIED VALUES

1. CASE NAME= W. J. SMITH WOOD PRESERVING
2. INITIAL CAPITAL INVESTMENT = \$ 0
3. ONE-TIME NONDEPRECIABLE EXPENDITURE = \$ 0
4. ANNUAL O&M EXPENSE= \$ 11396 1984 DOLLARS
5. FIRST MONTH OF NONCOMPLIANCE= 11, 1981
6. COMPLIANCE DATE= 11, 1982
7. PENALTY PAYMENT DATE= 10, 1986

STANDARD VALUES

8. USEFUL LIFE OF POLLUTION CONTROL EQUIPMENT = 15 YEARS
9. INVESTMENT TAX CREDIT RATE = 10.00 %
10. MARGINAL INCOME TAX RATE = 50.00 %
11. ANNUAL INFLATION RATE= 4.50 %
12. DISCOUNT RATE = 18.69 %
13. AMOUNT OF LOW INTEREST FINANCING = \$ 0

Annual & Semiannual sampling
which should have been
completed between 11/82
and 10/85.

W. J. SMITH WOOD PRESERVING

SEPTEMBER 17, 1986

THE ECONOMIC BENEFIT OF A 35 MONTH DELAY
AS OF THE PENALTY PAYMENT DATE, 47 MONTHS
AFTER THE INITIAL DATE OF NONCOMPLIANCE

\$ 5113
=====

-->-->-->--> THE ECONOMIC SAVINGS CALCULATION ABOVE <--<--<--<--<
USED THE FOLLOWING VARIABLES:

USER SPECIFIED VALUES

1. CASE NAME= W. J. SMITH WOOD PRESERVING
2. INITIAL CAPITAL INVESTMENT = \$ 0
3. ONE-TIME NONDEPRECIABLE EXPENDITURE = \$ 0
4. ANNUAL O&M EXPENSE= \$ 2345 1984 DOLLARS
5. FIRST MONTH OF NONCOMPLIANCE= 11, 1982
6. COMPLIANCE DATE= 10, 1985
7. PENALTY PAYMENT DATE= 10, 1986

STANDARD VALUES

8. USEFUL LIFE OF POLLUTION CONTROL EQUIPMENT = 15 YEARS
9. INVESTMENT TAX CREDIT RATE = 10.00 %
10. MARGINAL INCOME TAX RATE = 50.00 %
11. ANNUAL INFLATION RATE= 4.50 %
12. DISCOUNT RATE = 18.69 %
13. AMOUNT OF LOW INTEREST FINANCING = \$ 0

ATTACHMENT NO. 15
WASTEWATER PRODUCTION

Instructions: Please complete this form in as much detail as possible. Include additional information on attached sheets as necessary. Refer to the supplemental instructions and return this report to the address shown in the instructions.

1. COMPANY INFORMATION

A. Legal Name: W. J. SMITH WOOD PRESERVING CO.B. Facility Name: (SAME AS LEGAL NAME)
C. Mailing Address: 1700 WEST MORTON STREET
P.O. BOX 703
DENISON, TEXAS 75020D. Location: (SAME AS MAILING ADDRESS)E. Name of Owner(s): KATTY INDUSTRIES INC.F. Name of Operator(s): (SAME AS LEGAL NAME)

G. Facility Contact (provide the name, title and phone number of a designated person to contact if additional information is necessary.)

MR. BILL REDDING, PRESIDENT, W. J. SMITH WOOD PRESERVING CO. (214) 465-6161H. Number of Employees: 81I. Number of Shifts: 1J. Number of Months in Operation: 12

K. Provide the name of the publicly owned treatment works (sewerage authority, municipality, etc.) that receives the wastewater discharges from this facility (if this facility is not connected to a sewerage system describe where wastewater is discharged.)

DUCK CREEK WASTEWATER PLANT, CITY OF DENISON, TEXAS

2. NATURE OF OPERATION

A. List Raw Materials Used: ROUGH-CUT WOOD RAILROAD TIES AND WOODEN UTILITY POLESB. List Chemicals Used: (SEE APPENDIX "A")C. Describe Manufacturing or Service Activities Conducted and the Final Products: RAILROAD TIES/UTILITY POLES ARE CUT TO LENGTH AND AIR DRYED. THE SEASONED WOOD IS PRESERVED BY INJECTING CREOSOTE UNDER PRESSURE WITH STEAM IN RETORT VESSELS. THE PRODUCTS ARE REMOVED FOR RESALE.

D. Summarize Each Regulated Process:

Process Description	Production Rate	Pretreatment Standard Category	Subpart	SIC Code
WOOD PRESERVING	120,000 GAL/MO	TIMBER	WOOD	2491
	CREOSOTE	PRODUCTS	PRESERVING	
		PROCESSING	STEAM	

3. WASTEWATER FLOW

A. Total Plant Flow in Gallons Per Day (gpd): Average 38,200 Maximum 338,000*

*(NOTE: MAXIMUM FLOW INCLUDES THE COLLECTION AND TREATMENT OF STORM WATER.)

B. Individual Process Flows in Gallons Per Day (gpd)

Regulated Process	Average Flow Rate (gpd)	Maximum Flow Rate (gpd)	Type of Discharge (batch, continuous, other)
TREATED EFFLUENT/DETENTION BASIN	34,400	334,200	BATCH

From
Appendix D
"Industrial User Baseline
Monitoring Report"
W.J. Smith Part B Permit
Application

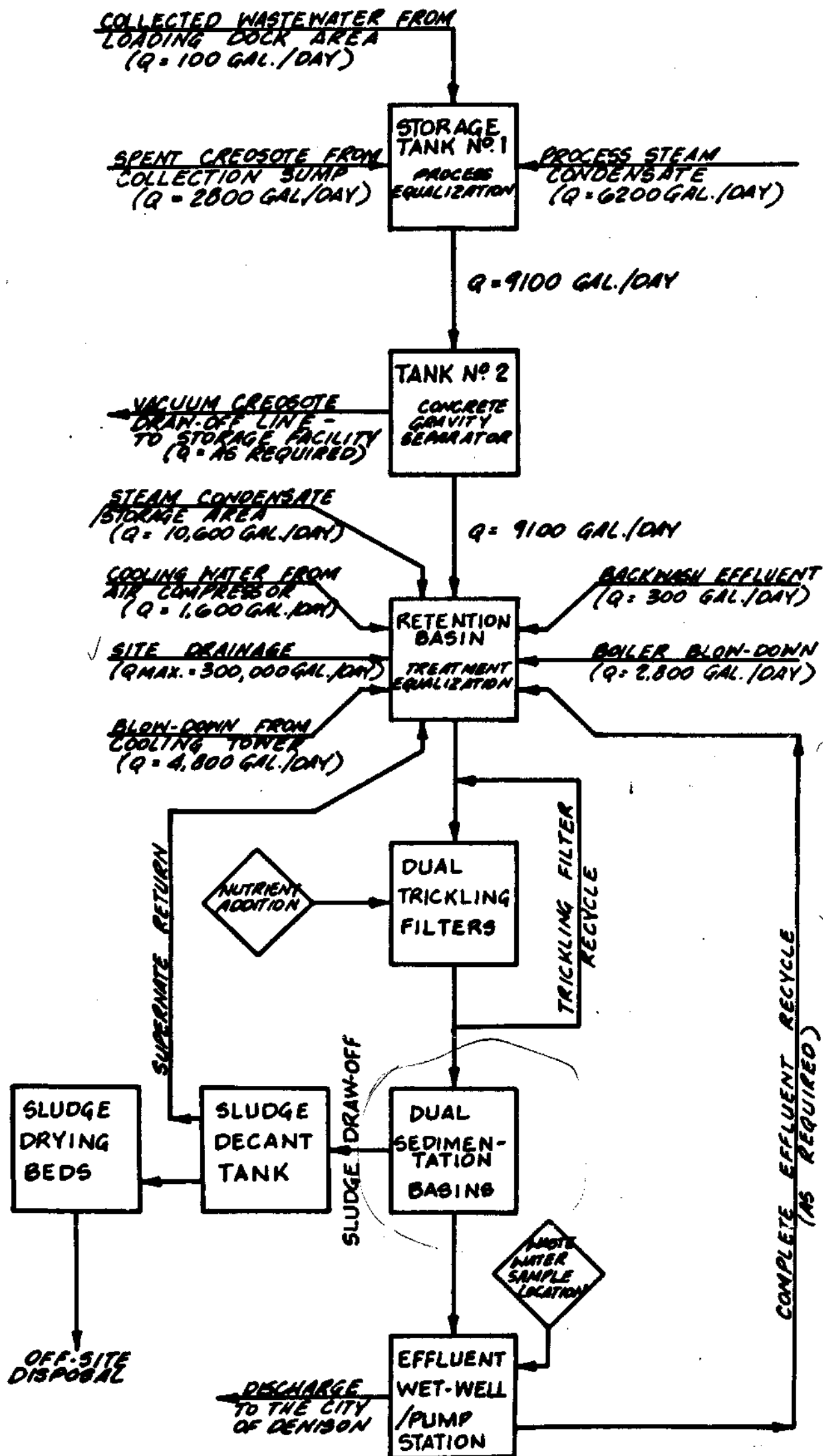


DIAGRAM 1

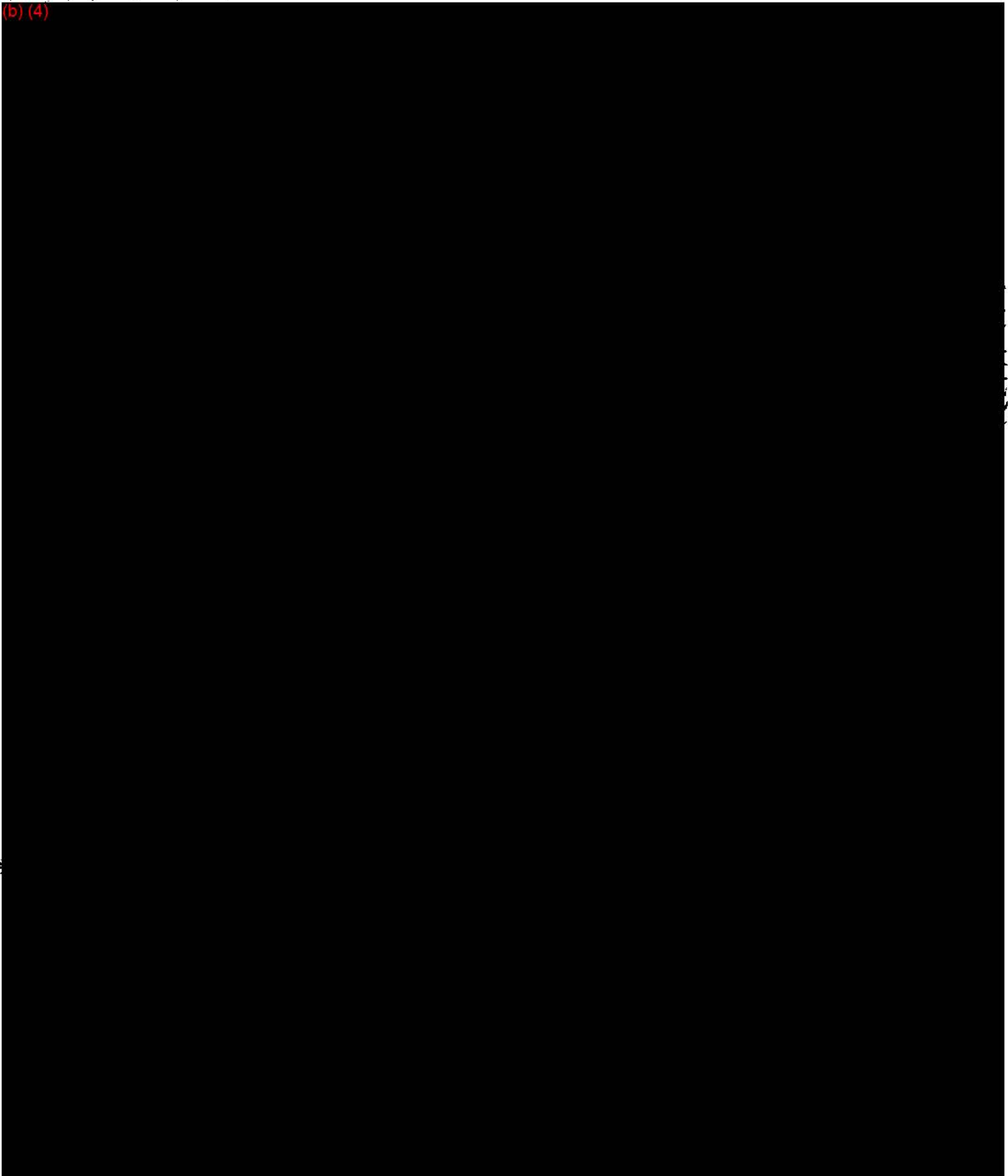
WASTEWATER TREATMENT SCHEMATIC

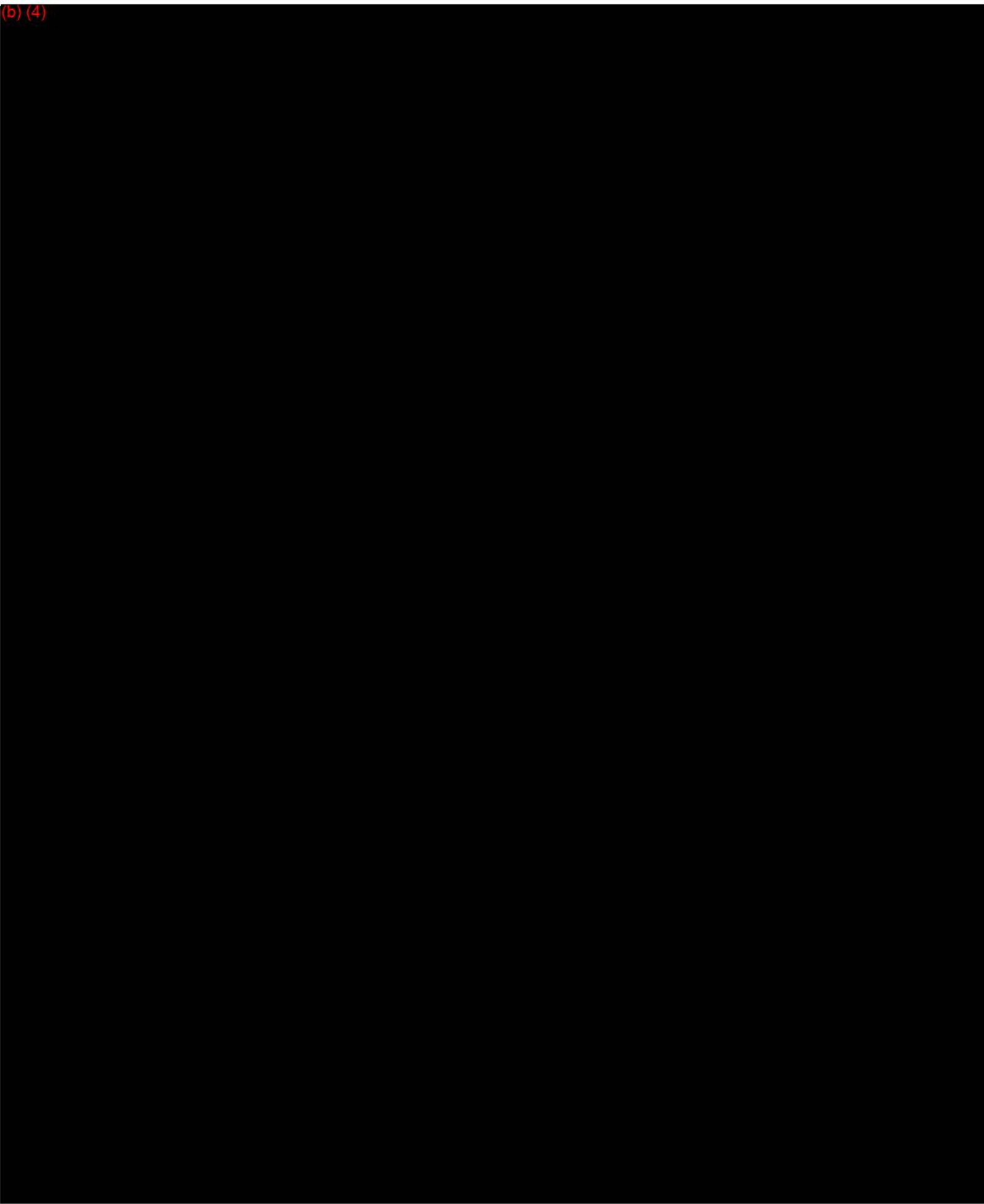
From Appendix
A

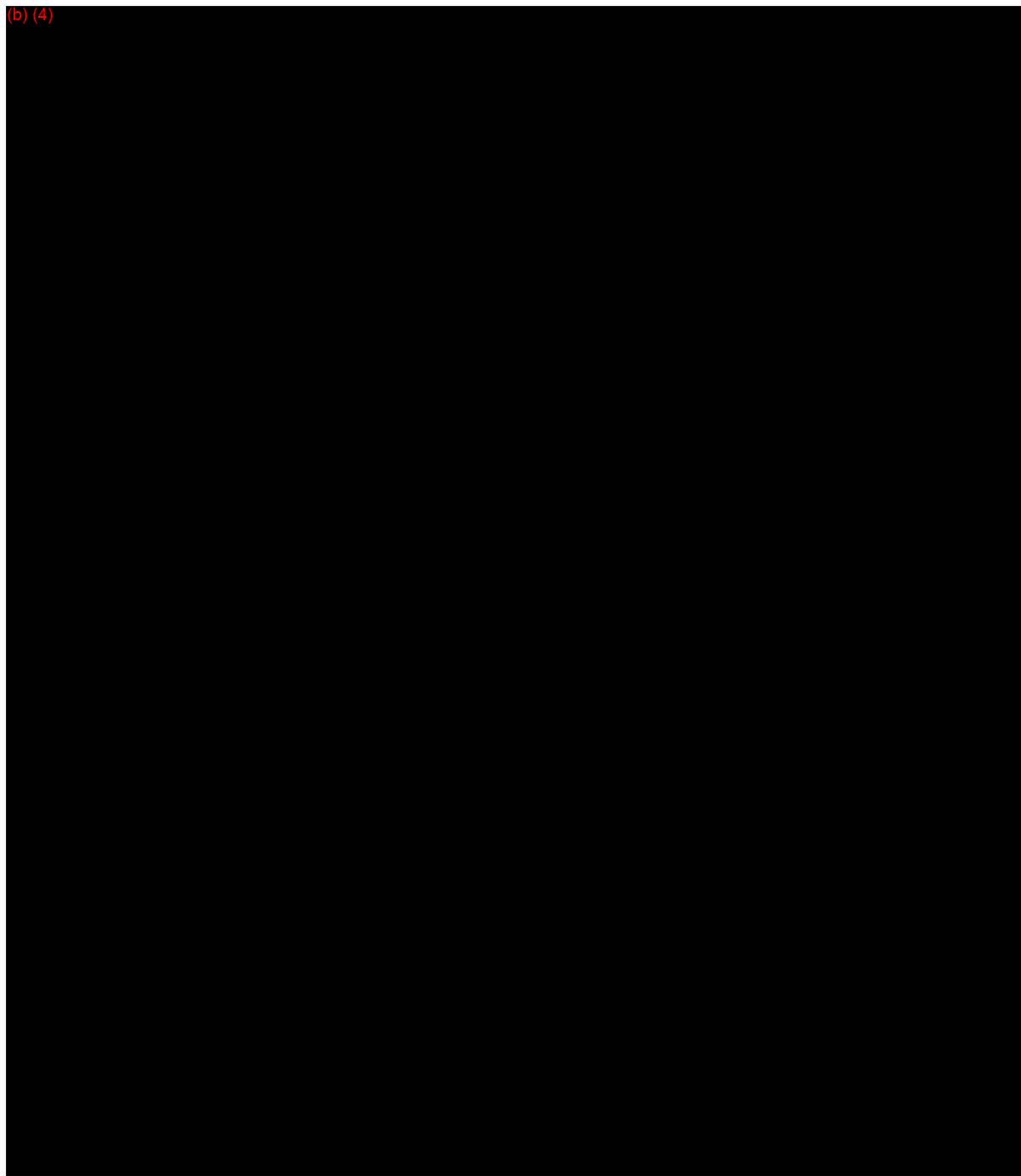
"Figures - Tables -
Maps"

W.J. Smith, Part
B Permit Application

Attachment 14







Attachment 17



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

February 13, 1987

MEMORANDUM

SUBJECT: Aspects Concerning the Groundwater
Monitoring System at W. J. Smith Wood Preserving
Company of Denison

TO: William Taylor, Chief
Enforcement Section (6H-CE)

FROM: Erlece P. Allen, Chief *Erlece P. Allen*
Technical Section (6H-CT)

We reviewed the submittals by Albert H. Halff Assoc. Inc. (November 1985, Part B and April 1986, Groundwater Detection Monitoring Program) representing W. J. Smith Wood Preserving Co. and TWC's July 23, 1986, CME report. From that evaluation it appears that technical inadequacies exist that may constitute violations in relation to the RCRA groundwater monitoring well design and installation requirements. Also, based on groundwater performance standards (§265.91(a), etc.), site characterization (geologic and hydrologic) is deficient.

The goals of a RCRA groundwater monitoring system in this case have not been satisfied. (Attached is a detailed review.) If you have any questions, please contact J. A. Trezzo at (214) 767-9727.

cc: Sam Becker (6H-C)

ATTACHMENT

Groundwater Monitoring Well Construction

The groundwater monitoring wells were installed by Moser Drilling (Water Well Drillers). They employed a mud rotary drilling method using an 8" drill bit. Of the seven (7) monitoring wells installed during the time period of 10/17/85 to 10/26/85; five (5) wells encountered an "oil" in a zone above a limestone layer and in one case below this zone. Based on TWC's CME field report (see Table 1) the wells were constructed of 4 1/2" PVC (glued at the joints). Multiple screens (field slotted) were used in four (4) of the seven (7) wells. The multiple screens ranged in length from 5' to 20', while the single screens were 40' in length. The annulus was "cemented" from a confining layer to the ground surface (ranging from 10' to 45' below the ground surface and below the "oil" layer). The rest of the borehole was "gravelpacked"; the length varied from 60' to 90'. No surface pads or locking caps were reported to be present. The wells were developed by bailer for a one (1) hour duration.

Groundwater Monitor Well Construction Details in Halff's Report

Figure 1 and 2 and page 1 show the monitoring well installations as discussed in their submittals (See attachment). Based on TWC's field information, neither technique was used in actual field construction. It is unclear if figure 2 represents proposed wells or existing detection monitoring wells but regardless such construction would be deemed inadequate in light of RCRA monitoring well system objectives.

Technical Inadequacies:

Drilling Method

Mud rotary most likely is not the preferred method of drilling. It is important that the methods used minimize disturbance of the subsurface and do not contaminate the subsurface and groundwater. Mud can cause formation damage around the borehole and thereby affect the chemistry of the groundwater. If not properly developed, well efficiency is impeded and interference (turbidity) during sample analysis are enhanced. Also the types of mud used can affect the sampling results. Mud type and additives need to be determined. Mainly, since "oils" were present (zones of contamination) in the subsurface, such a method could cause contaminants to be circulated and transported throughout the borehole. (A question to ask: Was the drilling rig and equipment decontaminated between all boring locations.)

Monitoring Well Construction

a) PVC casing and screens

PVC can deteriorate when in contact with aromatic hydrocarbons and other organics. Aromatic hydrocarbon compounds are present in creosote (see Table 2). In light that creosote is the contaminant of concern, PVC may not be inert and thereby not the appropriate material to use. The facility should demonstrate the type of PVC used and its long term structural integrity in relation to the contaminants monitored.

b) Glue

The use of glues to assemble PVC joints is inappropriate and can cause sample bias. Solvent bonded joints can leach substantial quantities of solvent components into the groundwater.

c) Well Screen and Filter Pack

While multiple screens and long single screens are appropriate for water wells, they do not meet the objectives of RCRA, which is to immediately detect a release from the hazardous waste management area by monitoring preferential flow paths. Such an approach requires depth-discrete placement of monitoring wells in the formations; long and multiple well screens do not permit sampling of discrete portions of a formation but can extend over more than a single flow zone. Such monitor well installation techniques can result in excessive dilution of a contaminant to the point of causing detection difficulties, especially for gross indicator parameters. It should also be noted that such installations can cause accuracy difficulties in groundwater flow direction determinations.

Field slotted screens also can potentially cause problems. Such screens will not retain material efficiently, and this can cause well clogging in the future. The TEGD prohibits such screens.

The technique of using an extensive filter pack (60' to 90') is also inappropriate. Such a method does not provide a depth discrete sample horizon. A number of horizons can contribute to the groundwater samples. Also it needs to be determined if any sieve analyses have been run on the gravel pack and the characteristics of the gravel. (The TEGD recommends that filter packs should extend no more than 2' above the well screen)

d) Well Annulus

It is unclear if the technique of cementing the annulus casing from the confining layer to the ground surface will prevent contamination ("oil" or other constituents) from affecting the groundwater sample. It is unclear what type of cement was used and if such a sealant method will be effective to preclude migration down the sides of the borehole.

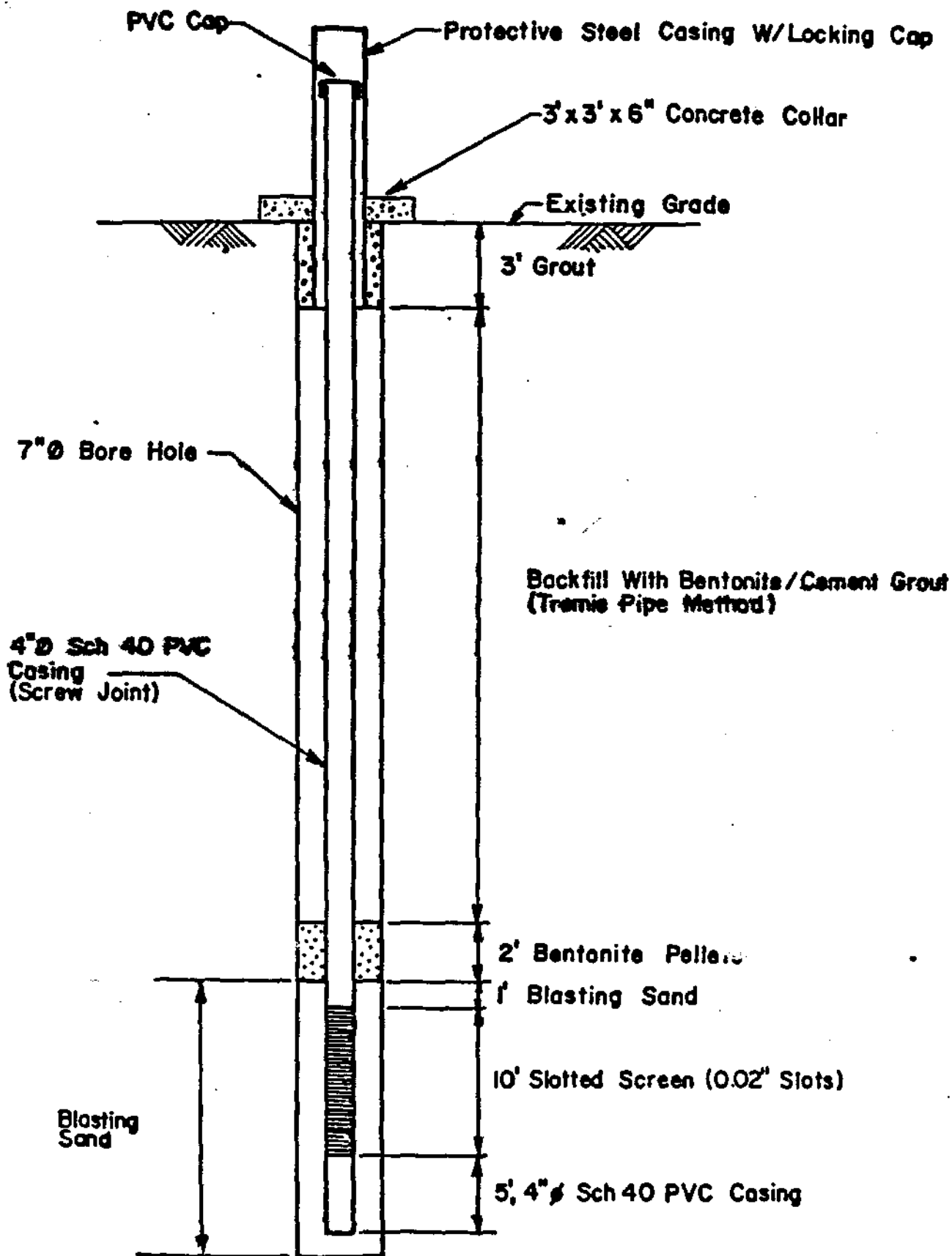
A double cased well would be preferred in such a situation. In this technique, a casing is set and cemented into the confining layer and a smaller diameter borehole is drilled inside employing RCRA monitoring well installation techniques.

e) Well Development

It is unclear how the monitoring wells were developed; according to the driller's log, a bailer was used to determine drawdown after 1 hour. It appears that such a method would not be adequate to properly develop a well to be clay and silt-free and restore natural formation hydraulic conductivity.

Site Characterization

Based on the two submittals only the seven (7) borings/monitoring wells were used to provide characterization of the subsurface hydrogeology. Such a number, in consideration of the heterogenous site conditions, is inadequate. Also the borings were drilled by water well drillers. It does not appear that a qualified professional was onsite during field borings and well construction. The boring logs do not provide detailed geotechnical information. According to the TEDG, boring logs should have a certain amount of information (see Table 3). Also appropriate field description and laboratory analyses of each significant geologic unit and soil zone should have been performed. It is unclear if soil samples were collected and at what intervals (if any) they were taken. No such information was available.



TYPICAL MONITORING WELL INSTALLATION

N.T.S.

from Nov 85 Part B Application
(as installed details)

Fig 1
~~FIG. 16~~

From April 86 GNDP

MONITORING SYSTEM

Well Construction

A typical monitoring well installation detail for a confined aquifer is shown on the following page. The hole will be advanced, preferable with a hollow stemmed auger, although air rotary drilling may be used. During the drilling samples will be obtained at ten foot intervals, and at all visual textural changes. The hole will be 6 to 8 inches in diameter.

The casing to be used will be 2-inch, Schedule 40 PVC with treaded joints. All fabrication will be by thermal or sonic welding to eliminate possible contamination from solvents and cements.

The entire depth of the water bearing strata will be screened with 0.020 inch PVC screen. This will provide an open area of approximately 12.8 square inches per linear foot of screen.

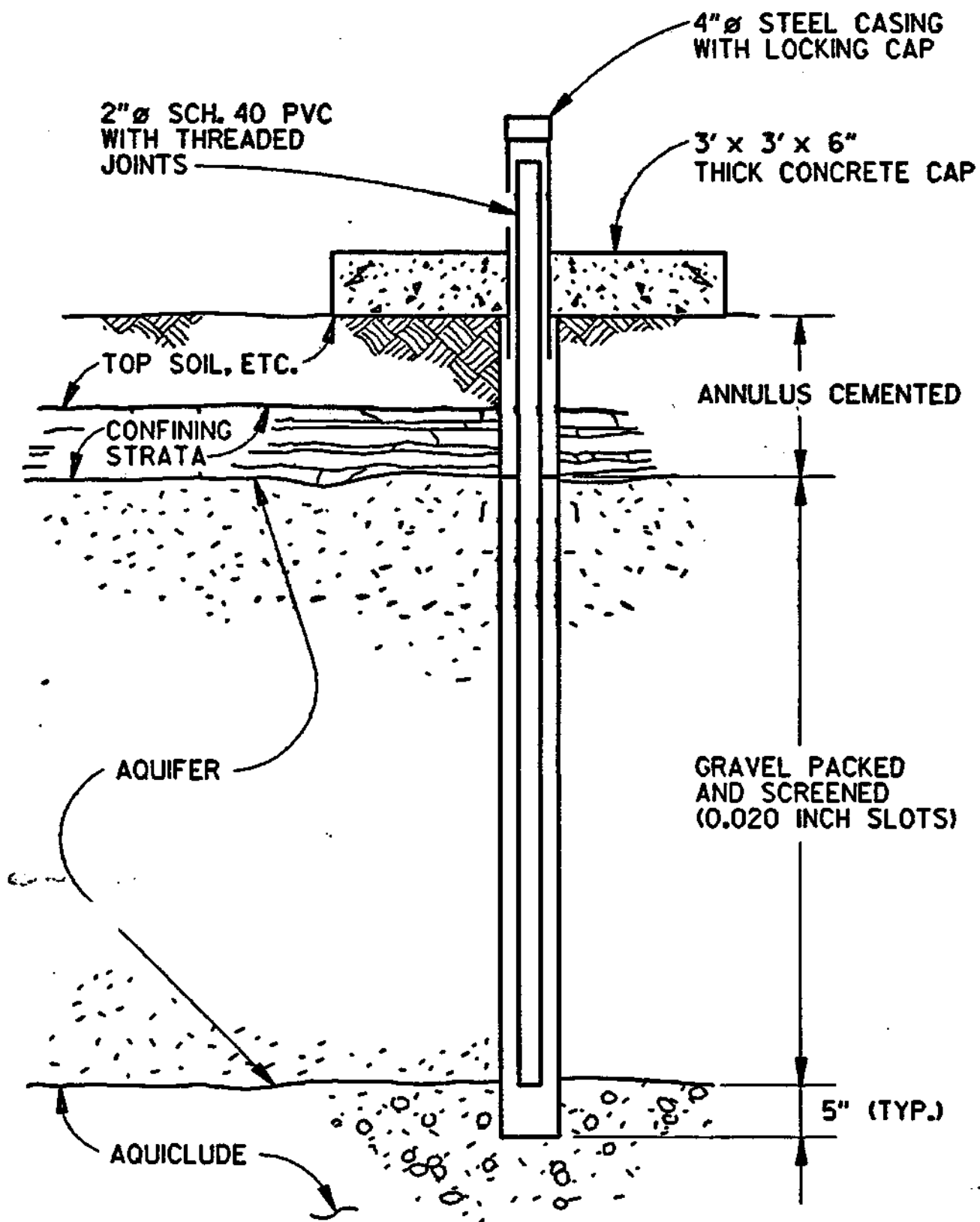
Based on information obtained from the existing monitoring wells, the depth of the proposed wells will range from 85 to 105 feet, and the length screened will vary from 35 to 70 feet.

The annular space will be cemented from the top of the aquifer to existing grade to prevent possible contamination.

The PVC casing will be terminated about three feet above grade and protected with a 4-inch steel casing with a lockable cap.

Well Location

The wells are located approximately as indicated on Appendix D, The Groundwater Monitoring Well Location Map. Well Number 1 will function as the up-gradient well, and Wells 2 through 7 will be the down-gradient wells.



TYPICAL MONITOR WELL INSTALLATION
CONFINED AQUIFER

Figure 2

April 1986
GW Detection Monitoring Program

N.T.S.

From TWC (7/13/86)

CME report

5/10/1

oil
14-18

11m

oil
14-18

oil
14-22

oil
30-38

11-20

oil
17-20

static level?

Attachment A-12. Table of Well Construction Details

Well Number

Hole diameter

Total depth

Drill method

Date drilled

Casing I.D.

Casing type

How joined

Stick-up length

T.O.C.-MSL

Ground level-MSL

Capped/Lockable

Surface pad size

Depth of surface seal

Annulus Fill

Depth-annulus seal

Depth-gravel pack

Length-gravel pack

Size-gravel pack

Depth to screen

Screen I.D./slot

Screen type

Screen length

Blank length

Development Method

1	2	3	4	5	6	7	
✓ 8"	✓ 8"	✓ 8"	✓ 8"	8" ✓	8" ✓	8" -	
✓ 100'	✓ 106'	✓ 98'	✓ 85'	100' ✓	105' ✓	95' ✓	
mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	mud rotary	
10-17-85	10-18-85	10-22-85	10-23-85	10-24-85	10-25-85	10-26-85	
✓ 4½"	✓ 4½"	✓ 4½"	✓ 4½"	4½" ✓	4½" ✓	4½" ✓	
✓ PVC	✓ PVC	PVC	PVC	PVC	PVC	PVC	
glued	glued	glued	glued	glued	glued	glued	
N.A. ①	N.A.	N.A.	2 10'	2 10'	2 N.A.	2 8'	
N.A. ①	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
711.0	760.5	761.0	737.0	746.0	756.0	748.5	
capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	capped, no lock	
none	none	none	none	none	none	none	
none	none	none	none	none	none	none	
Cement ②	Cement ②	Cement ②	Cement ②	Cement ②	Cement ②	Cement ②	
2 10'	2 30'	2 30'	2 30'	2 30'	2 45'	2 30'	
10'	30'	30'	30'	30'	45'	30'	
90' 10' 10"	76' 30' 10"	68' 30' 10"	85' 45' 15"	70' 7' 10"	60' 45' 10"	65'	
pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	pea gravel	
1. 20' ③ 2. 60' 3. 95'	1. 46' ✓ 2. 86'	1. 40' ✓ 2. 70'	45'	40'	65'	55'	
4½" / N.A. ④	4½" / N.A.	4½" / N.A.	4½" / N.A.	4½" / N.A.	4½" / N.A.	4½" / N.A.	
PVC	PVC	PVC	PVC	PVC	PVC	PVC	
1. 5' 2. 20' 3. 5'	1. 20' 2. 20'	1. 20' 2. 20'	40'	1. 20' 2. 20'	40'	40'	
1. 35' 2. 15'	20'	10'	None	20'	none	none	
barter	barter	barter	barter	barter	barter	barter	

① These elevations are being re-surveyed ② No bentonite used ③ Multiple screens ④ Field slotted

Comments: a. hole diameter too small b. casing should not be glued c. wells not adequately

surveyed d. no well locks e. no bentonite seals f. screens too extensive / not machined

A-

Table 2

CREOSOTE COMPOUNDS

AHC - aromatic hydrocarbons
K - ketones

	<u>Formula</u>	<u>Boiling Point</u>	<u>Concentration Range</u>
Coumarone - K	C ₈ H ₆ O	174	A
p-Cymene - AHC	C ₁₀ H ₁₄	177	A
Indene	C ₉ H ₈	182	A
Phenol - Alcohol	C ₆ H ₆ O	181	A
O-Cresol - Alcohol	C ₇ H ₈ O	190	A
Benzonitrile - AHC	C ₇ H ₅ N	191	A
m-Cresol	C ₇ H ₈ O	202	A
Naphthalene - AHC	C ₁₀ H ₈	218	D
Thionaphthene AHC	C ₈ H ₆ S	222	A
quinoline	C ₉ H ₇ N	243	A
2-Methylnaphthalene AHC	C ₁₁ H ₁₀	241	B
Isoquinoline	C ₉ H ₇ N	238	A
1-Methylnaphthalene AHC	C ₁₁ H ₁₀	245	A
4-Indanol	C ₉ H ₁₀ O	245	B
2-Methylquinoline	C ₁₀ H ₉ N	247	A
Indole	C ₈ H ₇ N	252	A
Diphenyl AHC	C ₁₂ H ₁₀	255	A
1, 6-Dimethylnaphthalene AHC	C ₁₂ H ₁₂	262	A
2, 3-Dimethylnaphthalene AHC	C ₁₂ H ₁₂	266	A
Acenaphthene AHC	C ₁₂ H ₁₀	281	D
Dibenzofuran	C ₁₂ H ₁₀ O	287	D
Fluorene	C ₁₃ H ₁₀	299	D

	<u>Formula</u>	<u>Boiling Point</u>	<u>Concentration Range</u>
1-Naphthonitrile AHC	C ₁₁ H ₇ N	297	A
3-Methyldiphenylene AHC	C ₁₃ H ₁₀ O	298	B
2-Naphthonitrile AHC	C ₁₁ H ₇ N	304	A
9, 10-Dihydroanthracene	C ₁₄ H ₁₀	305	B
2-Methylfluorene	C ₁₄ H ₁₂	318	B
Diphenylene Sulfide AHC	C ₁₂ H ₈ S	332	B
Phenanthrene AHC	C ₁₄ H ₁₀	340	D
Anthracene AHC	C ₁₄ H ₁₀	342	C
Acridene	C ₁₃ H ₉ N	346	A
Methylphenanthrene AHC	C ₁₃ H ₁₂	350	B
Carbazole	C ₁₂ H ₉ N	352	B
4, 5-Methylenephenanthrene AHC	C ₁₅ H ₁₀	353	B
2-Methylantracene AHC	C ₁₅ H ₁₂	360	A
9-Methylantracene AHC	C ₁₅ H ₁₂	361	B
2-Methylcarbazole	C ₁₃ H ₁₁ N	363	B
Fluoranthene AHC	C ₁₆ H ₁₀	382	D
1, 2-Benzodiphenylene AHC	C ₁₆ H ₁₀ O	395	B
Pyrene	C ₁₆ H ₁₀	393	B
Benzofluorene AHC	C ₁₇ H ₁₂	413	B
Chrysene	C ₁₈ H ₁₂	448	B
Unidentified Compounds in Distillate			D

A = Compounds having a concentration less than 0.5%

B = Compounds having a concentration greater than 0.5% and less than 3.0%

C = Compounds having a concentration greater than 3.0% and less than 5.0%

D = Compounds having a concentration greater than 5.0%

TABLE #3
FIELD BORING LOG INFORMATION

General

- Project name
- *• Hole name/number
- *• Date started and finished
- *• Geologist's name
- *• Driller's name
- Sheet number
- *• Hole location: map and elevation
- *• Rig type
- bit size/auger size
- *• Petrologic lithologic classification scheme used (Wentworth, unified soil classification system)

Information Columns

- *• Depth
- *• Sample location/number
- Blow counts and advance rate
- *• Percent sample recovery
- *• Narrative description
- *• Depth to saturation

Narrative Description

- Geologic Observations:
 - *- soil/rock type
 - *- color and stain
 - *- gross petrology
 - friability
 - *- moisture content
 - *- degree of weathering
 - *- presence of carbonate
 - *- fractures
 - *- solution cavities
 - *- bedding
 - *- discontinuities; e.g., foliation
 - *- water-bearing zones
 - *- formational strike and dip
 - fossils
 - *- depositional structures
 - *- organic content
 - *- odor
 - *- suspected contaminant
- Drilling Observations:
 - loss of circulation
 - *- advance rates
 - rig chatter
 - *- water levels
 - count of air used, air pressure
 - *- drilling difficulties
 - *- changes in drilling method or equipment
 - *- readings from detective equipment, if any
 - *- amount of water yield or loss during drilling at different depths
 - *- amounts and types of any liquids used
 - *- running sands
 - *- caving/hole stability
- Other Remarks:
 - equipment failures
 - *- possible contamination
 - *- deviations from drilling plan
 - *- weather

*Indicates items that the owner/operator should record, at a minimum.